Pharmacist Participation in Health Promotion Activities: Facilitators and Barriers

by

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DECLARATION

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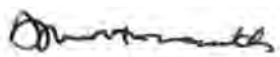

Helen Dorice Howarth

ABSTRACT

The purpose of this study was to examine pharmacists' participation in health promotion activities, particularly those activities undertaken outside the pharmacy. Facilitators and barriers to this participation were determined.

The great majority (80.2%) of Australia's 12 000 pharmacists practise in retail community pharmacies in a profession which is in demand, particularly in rural areas. Traditionally dispensing medications and selling over-the-counter medicines, pharmacists are one of the most accessible groups of health professionals, but the literature suggests that most community pharmacists do not generally participate in health promotion activities outside the pharmacy itself. Health promotion principles should underpin all facets of pharmacy practice but nomenclature confusion and limited definitions of health promotion restrict practice.

Tasmanian and Victorian pharmacists with Tasmanian undergraduate and graduate students were surveyed by anonymous questionnaires. Demographic data, participation in health promotion activities and facilitators and barriers to participation were determined. Quantitative analysis of results was obtained using SPSS-12.1© while qualitative data were extracted by themes.

From a total of 458 responses, significant differences in practice were identified between pharmacists in rural and urban practice. Although 42.4% of respondent Tasmania pharmacists and 46.2% of respondent Victorian pharmacists gave community talks in the previous two years, three-quarters of these respondents gave only one to three talks. Fewer (20%) respondents were involved in writing

newsletters, with only 5% involved in media presentations. In Tasmania, rural pharmacists gave more community talks while urban pharmacists tended to write newsletters. Victorian urban female practitioners engaged in community activities contributed more than their male colleagues, but for all respondents, age or hours worked did not restrict participation. Facilitators included interest, specific requests and community service. Significant barriers included time constraints for Tasmanian rural pharmacists but also the results revealed that urban pharmacists were not asked to participate. Despite providing more community talks, rural pharmacists were less confident public speakers. All respondents indicated there was lack of understanding of the knowledge and skills a pharmacist could offer and that they were left out of community activities, however most believed that, despite difficulties participating in these activities, it was important for the profession to contribute.

Lack of relevant literature examples and limited opportunities for professional development currently restricts pharmacists' understanding of the extent of health promotion practice. Widening community pharmacists' scope of practice in health promotion outside the four walls of the pharmacy may have important implications for the pharmacy workforce in its continued need to meet future demands.

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Chapter 1: Introduction

1.1 Overview

A recent workforce report indicated that currently, the pharmacy profession is in crisis (Health Care Intelligence Pty Ltd (HCI) 2003). It is anticipated in Australia that by 2010 the profession will still be 3000 participants short of demand (HCI 2003). The majority of Australia's pharmacists perform a traditional role dispensing medications prescribed by medical practitioners and selling over-the-counter medicines in community pharmacies. Pharmacy graduates are taught a wide range of knowledge and skills to equip them for their professional life. Job satisfaction might be enhanced by widening pharmacists' scope of practice in health promotion outside the four walls of the pharmacy. This has important implications for enabling the pharmacy workforce to meet current and future demand.

While pharmacists are seen as one of the most accessible groups of health professionals, the literature suggests that most community pharmacists generally do not participate in health promotion activities outside pharmacies. Health promotion is a concept that should underpin all facets of the pharmacist's role but the general profession poorly understands the definitions, theories and processes available to support health promotion practice.

The initial purpose of this study was to examine the literature for pharmacist involvement in health promotion activities, particularly those activities undertaken outside the pharmacy. Evidence was sourced to show how health promotion is

currently described by the profession in Australia, in the pharmacy *Professional Practice Standards* (Pharmaceutical Society of Australia (PSA) 2002) and *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b). The curricula of undergraduate courses offered by Pharmacy Schools in two Australian states (Tasmania and Victoria) and postgraduate curricula were examined and selected Pharmacy Schools' curricula and postgraduate courses of study were explored for evidence of health promotion content. Examples were found in Australian and international literature that demonstrated both a lack of understanding of health promotion theory, among the profession, and minimal recorded participation in health promotion practice by the profession.

These investigations into health promotion, pharmacy practice and education provided the basis for a series of questionnaires to pharmacists in practice in Tasmania in 1999 and 2002 and in Victoria in 2003 to ascertain the extent of health promotion participation activities and the barriers and facilitators affecting participation. Tasmanian pharmacy students and graduate trainees were surveyed in 1999 to gauge their interest in and potential expectations of health promotion practice. Environmental factors affecting involvement in local health promotion activities and the opinions of the respondents about health promotion practice and consequent participation were explored and the opinions of the respondents about health promotion practice and consequent participation were sought.

Over 80% of Australia's 12 000 pharmacists (Australian Institute of Health and Welfare (AIHW) 2003), practise in community pharmacies. Thirty per cent of Australia's pharmacies are located in rural areas and face increasing workforce shortage. Knowledge of the particular facilitators and barriers affecting rural

pharmacists' participation in health promotion activities and the environmental factors affecting them was one of the primary foci of investigation in this study.

This chapter begins with an outline of the author's recent pharmacy practice—the source for the initial ideas that evolved into this study. There seemed to be a gap in the profession's knowledge of and skills in health promotion practice and little participation in health promotion activities by pharmacists, particularly for those practising in rural Australia.

The key terms in the title of the study are defined and explanations of some terminology peculiar to the pharmacy profession are provided. The purpose of the study, the key research questions that emerged from a review of the literature, and the methodology employed are presented. Attention is drawn to the significance of the study and its limitations. The chapter concludes with an outline of the thesis.

1.1.1 My Pharmacy Practice

My practice, in recent years, has consisted of a combination of both community pharmacy and consultant practice. I have participated in the Falls Injury Prevention Clinic, the Therapists Promoting Health Group, and provided professional development for other staff within the Community and Rural Health Division of the state Department of Health and Human Services, Tasmania. I also work as a locum pharmacist in rural areas of Tasmania.

During the course of my career I have given numerous community talks on a variety of topics and I have been involved in planning groups for the development and implementation of community activities and events. Working closely with other health professionals, who had not previously considered including a pharmacist in their activities, gave me an opportunity to demonstrate the knowledge and skills my profession could bring to such committees and groups of health professionals, health workers and community members.

In a voluntary capacity, I am a councillor and former Vice President and Professional Development Coordinator for the PSA (Tasmanian Branch), the professional body that represents all practising pharmacists. Over the course of this study I have also given workshops on both health promotion theory and activities to pharmacy students and postgraduate pharmacy trainee students.

It is this experience and an interest in health promotion practice and theory which led to pursuing research into the participation by the pharmacy profession in health promotion activities. When talking to other pharmacy practitioners I found that while their knowledge of health promotion practice was limited, most members of the profession considered themselves an integral part of the community contributing often in local activities. I questioned the process, quality and quantity of many pharmacists' understanding of health promotion and wondered why some pharmacists contribute more than others to community activities.

Workloads are increasing as Australia's population ages, and there is pressure on the profession due both to shortage of pharmacists, and some disillusionment among young pharmacists. The profession must consider its future direction using the entire

scope of health promotion practice available as a foundation for practice and not just as an add-on service. 'A poster in the window is not Health Promotion' (Duncan 2002).

1.2 Key Terms, Purpose and Research Questions

1.2.1 Key Terms

The relevant terms in the title of this thesis are defined, and the descriptions supplied by Australian professional pharmacy bodies provide an insight into the knowledge and skills required for today's pharmacy practice. Definitions of the terms 'health' and 'health promotion' are also included, as health promotion literature relates to a form of practice not merely the simple dictionary meanings of these words. Also incorporated in this section is an explanation of some terms, whose use by the pharmacy profession differs from their use by other health professionals and the general community.

Pharmacist

Dictionaries in common use (Cambridge University Press 2004; Oxford University Press 2004) simply define a pharmacist as a person trained to prepare and dispense medicines and who works in a hospital or shop, without listing the ancillary activities necessary to legally and ethically work in this profession. This contrasts with definitions from within the profession itself such as that of Mahoney (1993), a practising rural pharmacist, who described a community pharmacist as a multi-skilled health professional who manages and operates a retail pharmacy.

Pharmacists are experts in drugs and medicines, with a body of knowledge and practice that equips them for an important and distinctive role in the community and also in the provision of health care. Pharmacy is the only health care profession possessing this particular combination of scientific knowledge and skills and thus its practice complements the role of other health professionals who have different levels of expertise in health and drug knowledge (PSA 2004). As well as this specialist knowledge, a pharmacist must hold an appropriate degree or diploma and be registered by the state-based pharmacy board to practice legally.

The extent of pharmacy practice includes expertise in drug and medicine knowledge to prepare, dispense, and sell products to patients together with information for the efficacious use of these products. Pharmacists also provide primary health care in the form of education and advice to promote good health and reduce the incidence of illness (AIHW 2003; HCI 2003; International Pharmaceutical Federation (Fédération Internationale Pharmaceutique—FIP) 1997, 1998, 2000; Jepson 2001; PSA 2003b).

Most definitions of a pharmacist use a product-centred approach and are based on the compounding and dispensing of pharmaceuticals in community retail outlets, hospitals or medical clinics (AIHW 2003). However, the *Seven Star Pharmacist*, developed by the World Health Organisation (WHO) (WHO 1997c) and the International Pharmaceutical Federation (FIP 2000; International Pharmaceutical Students' Federation 2004), stated that the pharmacist is a medication expert and caregiver who promotes health by provision of medication education, information and instructions for use of medication to both individuals and the population. The components of the role of the *Seven Star Pharmacist* are:

1. Caregiver—provides caring services;

2. Decision-maker—determines the appropriate, efficacious and cost-effective use of resources;
3. Communicator—the pharmacist is in an ideal position between physician and patient;
4. Leader—in a multidisciplinary team, or if other health care providers are in short supply or non-existent; and provides leadership for the overall welfare of the community;
5. Manager—the pharmacist must effectively manage resources;
6. Life-long learner—learning after school is essential in order to practise as a pharmacist; and
7. Teacher—the pharmacist has a responsibility to assist with the education and training of future generations of pharmacists.

Conversely, in other professional documents containing pharmacy education curricula content such as the FIP Policy: *Statement of Good Pharmacy Education Practice*, the definition of pharmacy practice is restricted to preparation, supply and control of medicinal products (FIP 2000). This is despite a wider role described in 1998 by the European Forum of Pharmaceutical Associations and the WHO in the *EuroPharm Forum Declaration* (WHO 1998b) together with the requirements of the *Seven Star Pharmacist* previously described. *The EuroPharm Forum Declaration* encouraged practising pharmacists to not only share responsibility for the education and training of pharmacy students but also promote the inclusion of public health and health promotion topics in pharmacy education.

Some groups such as the American College of Clinical Pharmacy encourage pharmacy practice to change and be in line with the current curriculum focus in

pharmacy schools. In 2000 it stated that the profession should change from a product-centred profession to a patient-care oriented profession (American College of Clinical Pharmacy 2000). This approach is supported by other authors (Peterson 2002; Tindall, Beardsley & Kimberlin 2003). Pharmacy curriculum in current undergraduate courses is patient-centred not business-centred. However, the product-centred and business-centred approaches are still current practice in the pharmacy profession.

It is said often both anecdotally and in the literature, that both the knowledge and skills of the profession are underutilised (Aslani, Benrimoj & Emerson 1999). Until the conflicting definitions of pharmacy practice—the product-centred approach of dispensing, medication and sales activities; and the patient-centred care approach of using information and advice—are meshed together, confusion about the role of the pharmacist will continue to exist.

Health

According to several general-purpose dictionaries (Cambridge University Press 2004; Oxford University Press 2004), 'health' is the condition or normal functioning of the body and the degree to which it is free from illness. Health is also described as a state of well being. Some dictionaries include the health of the mind in their definitions (Oxford University Press 2004).

However, in 1948 the WHO defined health as: 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 1998a; Wilkinson & Marmot 1998).

Health includes aspects of peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. These personal, social, economic and environmental factors affecting health status are also known as the determinants of health (Wilkinson & Marmot 1998; WHO 1998a). It is also acknowledged that the individual or society cannot change some of these aspects of health (Wilkinson & Marmot 1998; WHO 1998a). However, health should not just be described as freedom from sickness but must also take into account the fixed features or determinants influencing the health of individuals and communities.

Health Promotion

Usually, 'promotion' is described as encouragement of the popularity, sale, development or existence of something (Cambridge University Press 2004; Oxford University Press 2004). Health promotion as 'promoting health' began in the 1970s and was described by Catford (2004) as an approach that used the simple dictionary meanings of the words 'health' and 'promotion'.

In 1986, the *Ottawa Charter for Health Promotion* (WHO 1986) defined 'health promotion' as a process using features from the fields of anthropology, epidemiology, sociology, psychology and other behavioural sciences, public health, political science, education and communication (WHO 2002). Health promotion can therefore be classified as a series of strategies to allow populations to be healthy and make healthy choices (WHO 2002) using knowledge and procedures from a wide range of disciplines. It is defined as: '...the process of enabling people to increase control over, and to improve their health.' (WHO 1986, p. 1).

The terms 'health promotion' and 'health education' are often used interchangeably in the pharmacy literature and professional practice standards (Australian College of Pharmacy Practice (ACPP) 2003; PSA 1997, 2002). However, in 1998, the WHO (WHO 1998a) separated these definitions. 'Health education' is now identified as learning to improve health literacy and life skills conducive to individual and community health (WHO 1998a). In the past this term included the actions of advocacy and social or community mobilisation, however, these proceedings are now included as aspects of health promotion strategy. Therefore, the restricted definition of health education is now quite distinct from the definition of health promotion.

Facilitators

General use dictionaries (Cambridge University Press 2004; Oxford University Press 2004) define a facilitator as a person or a thing that facilitates, that is, makes an idea or action easier. A facilitator can promote an action or thing that needs to happen to allow a change to occur. In this study, facilitators are deemed to be the idea or actions that encourage or support practice changes.

Barriers

Usually, a barrier to a change in practice is any obstacle, circumstance or separation restricting or preventing that event, change or communication from occurring (Cambridge University Press 2004; Oxford University Press 2004).

Pharmacy Specific Definitions of Practice

From my professional experience, some terminology use and interpretations are peculiar to the pharmacy profession. The use of these within pharmacy practice

differs to their use by other health professionals, health workers, community workers or the general public.

From within the profession, pharmacy patrons are usually called patients, customers or consumers, but rarely clients. The term 'patient' does have a medical basis, but does not imply the ownership that may accompany the term if used by medical practitioners. For some time, suggestions have been made to upgrade this terminology to reflect the partnership nature of health but in reality no changes have been made (Smith 1994).

The usual meaning of 'counselling' for health practitioners is that of an exchange of views on personal, social or psychological problems to clarify life situations (Blenkinsopp, Panton & Anderson 2000). Counselling of a person can take some time in an individual situation or it may require a series of sessions with a counsellor to accomplish a negotiated and desired goal. However, pharmacists interpret 'counselling' as advice (Blenkinsopp et al. 2000) or information provided about the correct use of medicines or treatment to optimise therapeutic outcomes (PSA 2002). In the pharmacy setting, this usually occurs in the few minutes available at the time of giving the customer a dispensed medication or when selling a product or medicine.

In the context of pharmacy practice, 'community' refers to a retail community pharmacy (Mahoney 1993). According to the WHO, a community is a group of people with a shared culture, value and norms (WHO 1998a). People can belong to a range of communities. Pharmacists may not have an understanding of the multiple communities that exist around them, as this term is used within the profession to

differentiate community practice from that of hospital or consultant pharmacy practice.

A 'consultant pharmacist' usually refers to a pharmacist who may not be necessarily pharmacy based, but who conducts medication management reviews (MMR) in nursing homes or home medication reviews (HMR) in the domiciliary setting. These activities require additional study and accreditation through the Australian Association of Consultant Pharmacists (AACP).

Some terminology in the pharmacy profession is unique to it, and this language use may impinge on the pharmacist's recognition of the value and range of activities available in the local community especially those with a health promotion framework. Universally recognised terminology is necessary for health professionals to converse on the same level. Pharmacists are multi-skilled health professionals who have the potential to have a broad role in the community to advocate, enable and mediate as important steps in helping the community to address common issues. Particularly in the rural practice situation, a pharmacist is a resource offering expertise and has a level of influence in the community. However, to enhance the role of a community resource the pharmacist must understand all the facets of health promotion practice and terminology in order to take part effectively in community activities.

1.2.2 Purpose

The purpose of this study was to investigate pharmacist participation in health promotion activities, particularly those activities outside the pharmacy setting.

Personal knowledge of this role undertaken by other colleagues and an apparent lack of written research in this area provided the impetus to investigate the actual participation rates by the individual members of the pharmacy profession in health promotion activities.

A review of the literature showed that pharmacist involvement in health promotion is centred on those activities that take place in pharmacies (Berbatis, Sunderland, Mills & Bulsara 2003; Blenkinsopp et al. 2000), and also that health promotion itself appears to have different expressions within the professional literature for similar activities (PSA 2002). Of the few examples found of participation in health promotion activities outside the pharmacy itself there was little specific detail about the nature of the activities undertaken. When discussing this issue with colleagues, members of the profession often talk about their activities without realising these activities constitute health promotion using the WHO definitions. Less often, they talk about their contribution to the field of health promotion outside the pharmacy itself. However, much of this day-to-day involvement and ad hoc community participation in health promotion activities is not recorded in the pharmacy literature.

Mahoney's (1997) investigation revealed that rural pharmacy practice is different to metropolitan practice with examples provided to support his case. In Australia, pharmacy practice is divided geographically using the PhARIA system (Appendix 5.1, p. A-63), which separates practice into either metropolitan (capital city or areas with a population over 100 000 people) or into rural and remote areas. These non-metropolitan rural and remote areas of practice are further divided on a population and accessibility basis. In Mahoney's (Mahoney 1997) work, specific health promotion activities undertaken by rural pharmacists were not identified.

Comparison between rural and urban practice and a quantitative and qualitative analysis of pharmacist involvement in local health promotion activities were not found in the review of the literature.

There was an apparent lack of an holistic approach by the profession to health promotion practice and also an apparently narrow interpretation of health promotion definitions used to describe aspects of this practice within the *Professional Practice Standards* (PSA 1999), at the inception in of this study, and this approach continued during the course of this study with the second version of these pharmacy *Professional Practice Standards* (PSA 2002) and also the *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b). These documents appear to use terminology describing a health promotion activity as 'health education', so allowing the profession to consider health promotion differently to that described and defined in other health promotion literature (WHO 1998a). Consequently, the profession's members may be confused as to the importance of health promotion in everyday practice and the opportunities available outside the pharmacy.

From my personal experience the profession's membership believes it contributes to many health promotion activities outside the pharmacy practice setting and conducts many health promotion activities within the pharmacy itself. However, many of these activities are informal and local in nature and may not even involve the pharmacist if an assistant is sent as the pharmacy representative. Many activities are extensions of national campaigns, such as posters or displays in the pharmacy itself. As a result, this study also endeavoured to discover the extent of proactive involvement in health promotion activities by the pharmacy profession as well as those activities that involve the pharmacist.

A lack of current research, particularly in the rural setting, and a narrow interpretation of the definition of health promotion (PSA 1999, 2002, 2003b) by the professional standards, suggested a basis for the development of the research questions for this study. A desire to map current activity and the profession's contribution to health promotion activities was this study's starting point.

1.2.3 Research Questions

The primary research question investigated 'why some pharmacists participate in community health promotion activities, particularly those activities undertaken outside pharmacies and others do not'. Environmental factors, such as barriers and facilitators to participation, believed to be of significance by the profession, were examined. Although some suggestions of barriers and facilitators were given in the survey instrument, it was hoped that respondents would add their own thoughts and experiences. Other environmental factors that could affect participation, such as differences in metropolitan or rural practice, hours of work, gender, age and work location (community or hospital), were also examined.

The second research question investigated 'whether or not educational opportunities available to undergraduate and postgraduate pharmacy students had an effect on their involvement in health promotion activities'. Undergraduate curriculum in the universities assumed to have trained the practising pharmacists in the selected areas for this study, and postgraduate options available for current practising pharmacists, were also examined for health promotion content.

In light of these questions, the relevant literature was examined and the barriers and facilitators to health promotion activities by pharmacists in the study areas of Tasmania and Victoria were explored. A review of the literature was conducted using both Australian and overseas literature found on this topic. With the results of this literature review, the survey instruments were developed to allow respondents to provide data for both quantitative and qualitative analysis of health promotion participation by the pharmacy profession.

1.3 The Setting

The setting for this study was the Australian state of Tasmania and a selected area of the state of Victoria, west and north of Melbourne. Pharmacists, pharmacy students and graduate trainees from Tasmania and pharmacists from Victoria were surveyed in this study, which took place between 1999 and 2003 in four phases. After a pilot study, using a randomly selected 5% sample of registered Tasmanian pharmacists in November 1998, Phase 1 of the study was conducted using all registered pharmacists (excluding all those in the pilot group) in March 1999. All registered pharmacists from Tasmania with a Tasmanian address were sent the questionnaire. For Phase 1a, in 1999, Tasmanian School of Pharmacy second-year and third-year students were sent a modified survey instrument. The graduate trainees undergoing the Tasmanian Board of Pharmacy *Graduate Accreditation Programme (GAP)* in the same year were also surveyed. In Phase 2, in November 2002, Tasmanian registered pharmacists selected under the same conditions as in the previous pharmacist survey were again sent the same instrument as in 1999 to investigate any change over time. The final phase, Phase 3, was conducted in October 2003. The questionnaire was

sent to a population of Victorian registered pharmacists with an address in the chosen survey area, to examine their practice in health promotion compared to that of Tasmanian pharmacists.

1.4 Significance of the Study

Identification of barriers and facilitators to health promotion practice and a comparison of change in participation over time together with an analysis of differences between rural and metropolitan areas of practice are the significant results provided by this study for the pharmacy profession and previously not seen in the literature. The results of this study suggested that pharmacists were interested in health promotion practice but strategies must be put into place to facilitate participation, especially in rural areas of Australia.

The study is also significant because it challenged the profession's approach to health promotion it its standards. During the course of this study, conducted over time and between states, both professional standards in practice and competency standards were produced by pharmacy professional organisations. These standards were found to imply that heath promotion was an additional activity to be undertaken by the profession. The study suggested that many standards did not use the health promotion theory and practice models available from the literature. The results of review of these standards for this study suggested that consideration should be given to removing the health promotion professional standard and incorporating its principles in all standards.

The results of the study suggested that the profession should review its expectation of practice such as in the area of dispensing and length of opening hours, and this is significant because it revealed that incorporation of health promotion activities can add to breadth of community pharmacy practice. The current model used is neither 'sustainable, competitive, focused nor professionally satisfying' (Peterson 2002).

For the first time in Australia the level of participation by pharmacists in health promotion activities was investigated and comparisons were made between rural and metropolitan practice, gender, age or hours of work. The study is also significant because it ascertained the opinions of the members of the profession itself rather than the business and staff that is the retail community pharmacy.

This study showed the paucity of health promotion curricula for both undergraduate pharmacy students and for practising pharmacists. As health promotion is a mode of activity that can support current pharmacy practice, the results suggested that the profession itself must advocate for a review of health promotion content in the Pharmacy Schools' courses. Updating the available distance learning modules in health promotion is also essential for practising pharmacists.

1.5 Limitations

The limitations of this study related to time and financial constraints, a low survey return rate and some terminology used within the survey itself particularly relating to area of practice.

Time and financial constraints did affect the study. The study took place over 5 years, however, this then allowed for a comparison of results to see if any change over time occurred in the two Tasmanian surveys. Financial constraints of this study restricted the surveys to single mail-outs in each case and also the timing of the surveys mail-out near to the holiday seasons may have further limited response.

In 1999, Tasmania had only 2.5% of Australia's registered pharmacists (468/18 853) (AIHW 2003 p. 21). Due to this low number and as it was anticipated that participation in health promotion activities may be relatively minimal, using a random sample would not have achieved any results of significance. Accordingly, it was decided to use the whole state as the survey sample for this study.

Survey wording caused some limitations. Participants were required to annotate their surveys with their area of practice with either capital city, urban or rural. Due to the low rural proportion received after the first Tasmanian survey (1999), it was assumed that some Tasmanian pharmacists might not consider areas outside the surrounds of Hobart as rural, despite this being the case using recognised classification systems such as RMMA, ARIA and the pharmacy specific PhARIA indices (Appendix 5.1, p. A-62). Consequently the second survey was numbered to allow this reclassification if necessary, yet still maintaining the anonymity of respondents.

Although these limitations may have affected some aspects of the study, the low rate of survey return was the main limitation. Other factors such as respondents choosing urban when their practice could be called rural were recoded to provide useful data for analysis.

1.6 Outline of the Thesis

This thesis is divided into six chapters. In Chapter 2, the scene is set for the review of the literature of health promotion, in both health care and pharmacy practice. An examination of the various theories and models reveals the broad range of nomenclature and interpretation used in health promotion practice, contrasted with the somewhat narrow interpretation of health promotion, by the pharmacy profession. Critical analysis of two documents which currently guide Australian pharmacy practice—the pharmacy *Professional Practice Standards* (PSA 2002) and *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b)—provides the evidence for this claim. An analysis of the pharmacy workforce literature, with a particular emphasis on rural practice, reveals the state of current pharmacy practice and gives an explanation of suggested and perceived professional trends both in Australia and overseas. Current health promotion curricula for undergraduates and postgraduate students is explored and examination of the health promotion content in the existing courses of the Tasmanian and Victorian schools of pharmacy shows limited inclusion of both theory and health promotion practice over the four years of study. Examination of the limited range of postgraduate education opportunities for pharmacists by face-to-face or distance learning courses gauges the measure of the importance of health promotion practice by the profession.

In Chapter 3, health promotion content in the pharmacy practice literature together with opinions about the future of the profession from researchers in Australia, Canada, Great Britain and the United States is examined. Examples of health promotion practice in Australia are explored, in chronological order, to give a sense of change over the past twenty years, and as an attempt to describe the health

promotion practice of the profession. An account of the overseas literature enables comparison of examples of practice and interpretation of terminology used to be compared to Australian examples. The chapter concludes with a discussion of the future of pharmacy practice comparing the views of researchers from Australia and overseas.

The research methodology is described in Chapter 4 explains and justifies the design, method and survey instruments developed for this study, which took place in four phases from 1999 to 2003 in both Tasmania and Victoria. Included are the assumptions that were made to enable analysis and interpretation of the results from the various questionnaires.

In Chapter 5, the results of the surveys are presented in terms of demographic data, types of health promotion participation, facilitators and barriers to participation, and the opinions of the respondents regarding to the role of health promotion in pharmacy practice. Quantitative analysis of data pertaining to each phase together with a comparison between Tasmanian phases over time, Tasmanian and Victorian phases, and all phases together reveal significant differences in practice in metropolitan and rural areas. The qualitative data provided by the respondents about health promotion practice and participation in health promotion activities reveal the various views held by the respondents.

In the final chapter of this thesis, discussion, identification and reflection on the key themes that have emerged from the study together with recommendations and conclusions are disclosed. The first theme that emerged was pharmacists' knowledge of health promotion, which includes literature definitions, and the

international perceptions of health promotion in pharmacy practice. The second theme was pharmacists' participation in health promotion and the factors affecting that participation such as environmental aspects including the barriers and facilitators. The third theme was that of training in health promotion for both undergraduate pharmacy students and for qualified pharmacists, which finally shows the limited nature of available courses in Australia. Reflection on these themes and the conclusions that can be drawn together with the five recommendations for practice change conclude this chapter.

To complete this thesis, the appendices contain documents to support this study. Included are explanations of the acronyms used, selected copies of parts of the relevant pharmacy professional standards and competency standards, examples of the instruments used in this study and copies of the ethics applications. An explanation is provided of the rural classifications systems together with maps showing the geographic areas used for this research. In Appendix 6, the statistical analysis is confirmed by the inclusion of reliability tables of data extracted from the surveys. Finally, there is a copy of an abstract and paper presented at the 7th Australian National Rural Health Alliance Conference in Hobart in 2003.

This outline shows the manner in which a study into health promotion participation by the pharmacy profession will be presented in this thesis. Both qualitative and quantitative results from the series of surveys pertaining to activities undertaken by respondents has resulted in recommendations for future pharmacy practice, particularly for those who work in rural regions of Australia.

1.7 Summary

This chapter began by defining the crucial terms in the title of this study and provided explanations of some terminology peculiar to the profession of pharmacy. This investigation evolved through the author's personal awareness of a lack of research, the specific areas of differences in interpretation of health promotion, anecdotal knowledge of participation by the profession, which is usually not recorded, as well as assumed differences between metropolitan and rural practice.

This need for both research into and an holistic approach by the profession to health promotion practice provided the background for the development of the research questions, which were described. The first question examines the facilitators and barriers affecting pharmacist participation in health promotion activities. The second question explores current health promotion training and investigates whether this had any influence on pharmacists' knowledge and participation in the area of health promotion. With an overlay of rural practice, this study also contributes to workforce issues in Australia and demonstrates the involvement of the rural practitioners in health promotion activities.

Chapter 2: Setting the Scene

2.1 Overview

In Chapter 2 the literature, which establishes the standards of practice within the profession, and which describes pharmacy workforce issues, and the consequent impact of the rural setting on pharmacy practice, is examined. This chapter provides the background necessary to determine the nature of health promotion in practice in the pharmacy literature, which will then be explored in Chapter 3, with a description of health promotion content in the current undergraduate curricula (Tasmanian and Victorian Schools of Pharmacy) and the postgraduate options for pharmacists studying health promotion.

The first section examines the various theories, models and frameworks for health promotion to provide an explanation of the breadth and depth of health promotion practice. The central document for health promotion, the *Ottawa Charter* (WHO 1986), and its supporting documents, is reviewed as it contains the strategies to implement the many health promotion theories and models. Review of a range of models underpinning health promotion practice demonstrates that not all have origins in the health field but come from a variety of disciplines. These range across models of health behaviour and health behaviour change, communication strategies to promote health, community change and community action for health, organisational change and health-supportive organisational practices, and development and implementation of healthy public policy. A description is provided of the role of capacity-building theory in health promotion practice and its implications for both

health professional and pharmacy practice. These theories and practices that have been developed, support the *Ottawa Charter*, and thus provide the knowledge base for pharmacy health promotion practice.

The next section examines the dimensions and definitions of health promotion in the context of pharmacy practice showing different interpretations used within the pharmacy profession compared to the health profession as a whole. The pharmacy *Professional Practice Standards* and *Competency Standards for Pharmacists in Australia 2003*, which together provide the basic platform for the profession, and the interpretation and inclusion of health promotion within these documents is discussed. Although the Health Promotion Standard is the first pharmacy standard in the *Professional Practice Standards*, other standards of practice contain many activities which could be considered as health promotion but are not recognised as such. A review of the *Competency Standards for Pharmacists in Australia 2003* provides yet another definition of health promotion but reinforces the general misunderstanding of health promotion by the pharmacy profession.

The third section provides an analysis of the pharmacy professional workforce literature, particularly looking at the demographic factors of age, gender, area of practice, hours of work and place of work. These same factors in the rural context and a description of rural pharmacy practice set the scene to compare health promotion participation in city, urban and rural working environments. Insight into the trends in the pharmacy profession worldwide reveals some of the concerns driving potential practice change and the implications for current and future practising pharmacists.

To conclude this chapter, a summary is provided of health promotion curriculum in the School of Pharmacy at the University of Tasmania, the Victorian Pharmacy Schools at Monash University and Latrobe University and available postgraduate course opportunities for pharmacists. This review demonstrates that there are quite different approaches to inclusion of health promotion theory within each curriculum. Also, it shows that there are only a limited number of options available for practising pharmacists for postgraduate study, in health promotion, in Australia, potentially restricting the incorporation of health promotion theory and strategies among the profession.

2.2 Health Promotion in Health Care

To set the scene for the review of pharmacy health promotion practice, a broad range of definitions, as well as models and theories from the health promotion literature will be examined. An explanation of the concept of capacity building concludes this section as the apparent hidden nature of this model has implications for health promotion programmes and consequently its inclusion of the pharmacy profession.

2.2.1 Dimensions and Definitions of Health Promotion

Catford (2004) described four dimensions in health promotion to differentiate activities over the past four decades. In the first dimension, set in the 1970s, preventable diseases and health risks (e.g. heart disease, cancer, tobacco, nutrition, addiction) were tackled primarily through information and simple education. In the 1980s, the *Ottawa Charter*, outlined later in this chapter, used a complementary

intervention approach which thus shaped the second dimension. The third dimension, in the 1990s, recognised the value of reaching people through the settings and sectors in which they live and meet (e.g. schools, cities, health care settings, workplaces). In the fourth dimension of the 2000s, Catford illustrated that there is a need to move on from the narrow entry point of disease prevention and control to the wider agenda of social determinants. The challenge, he stated, was to respond to the global trends of massive social change which impact on health, welfare and the environment (Catford 2004).

In the literature there are a number of definitions of health promotion, which link the dimensions described above. They show health promotion is a method of practice, not just an additional service. The most quoted definition of health promotion is that provided in the WHO paper developed for the *Ottawa Charter* (WHO 1986, 1997a, 1998a). Health promotion is: '...the process of enabling people to increase control over, and to improve their health' (WHO 1986, p. 1).

The *Ottawa Charter*, written in 1986, was developed and adopted by the participants at the first International Conference on Health Promotion in Ottawa, Canada. This charter was developed using the documents of the Declaration of Primary Health at Alma Ata and the WHO papers including the World Health Assembly debate and Targets for Health for All (WHO 1986). It is now widely accepted as the foundation for complementary health and health promotion. The Charter acknowledges there are prerequisites for health such as peace, shelter, education, food, income, a stable eco-system, sustainable resources and social justice and equity. Good health also requires advocacy, enablement and mediation. To integrate these prerequisites, the

Ottawa Charter used the following strategies and approaches divided into five action areas:

- *Building healthy public policy.* This action area requires policy makers to work in a coordinated manner and consider the health implications of all their decisions, thus ensuring a healthier approach to goods and services, public services and environments. The aim of this approach is to make the healthy choice the easiest choice.

- *Creating supportive environments.* Health cannot be separated from the goals of a healthy society in which we take care of each other and the environment. Thus, health promotion generates a healthy way of life, supported and managed within its own local community setting.

- *Strengthening community action.* The community itself sets priorities, makes decisions, and plans and implements these strategies for better health. Therefore, the community is empowered to be in charge and thus control its own health.

- *Developing personal skills.* Personal and social development is supported by provision and access to information, learning opportunities for health and enhancement of life skills. This development must take place in all settings such as schools, home, work and community settings by educational, professional, commercial and voluntary bodies and institutions themselves. This allows all people to have additional options through knowledge, and therefore, a capacity to make informed health choices.

- *Reorienting health services.* All individuals, community groups, health professionals, health system institutions and governments must work together to improve health. The health sector must move beyond provision of clinical and curative services to consider the social, political, economic and physical environment. This then requires health research and changes in professional education and training to thus allow reorientation of all health services to consider the total needs of the individual and the community (WHO 1986).

In 1997, the *Jakarta Declaration on Health Promotion into the 21st Century* (WHO 1997a), was developed at the fourth International Conference on Health Promotion, in Jakarta, Indonesia, to support the *Ottawa Charter* and to acknowledge that societal development and responsibility was necessary for health promotion activities to be successful. Success is best achieved by a combination of approaches in partnership. The Declaration espoused that people need to be at the centre of health promotion actions and decision-making processes and this needs to happen where they live and work. Access to information and education is necessary for effective participation. Health promotion, supported by a combination of local strategies, can then be used to attain the best health outcome for any community.

In summary, the *Jakarta Declaration* five priorities for health promotion in the 21st century are:

- Promote social responsibility for health;
- Increase investments for health development;
- Expand partnerships for health promotion;
- Increase community capacity and empower the individual; and
- Secure an infrastructure for health promotion (WHO 1997a, 1998a).

Other definitions in the health promotion literature appear to be based on the *Ottawa Charter* but only utilise some of its action areas. For example, Tones and Tilford defined health promotion as, 'Health Promotion = Health Education x Public Health Policy' (Tones & Tilford, 1994, cited in Blenkinsopp et al. 2000, pp. 3–4). This definition supports three of the five action areas of the *Ottawa Charter*. These are developing personal skills, building health public policy and reorientation of health services. Green and Kreuter (Green & Kreuter, 1991, cited in Egger, Spark, Lawson & Donovan 2002, p. 5) defined health promotion as education and environmental supports, which can be interpreted as the two action areas of development of personal skills and creation of supportive environments. Beattie (Beattie 1984, 1990 cited in Blenkinsopp et al. 2000, pp. 4–5) described health promotion as quadrants consisting of 'health persuasion techniques, legislative action, personal counselling and community development'. These quadrants support all sections of the *Ottawa Charter* (Blenkinsopp et al. 2000, pp. 2–6). As other definitions only use facets of the *Ottawa Charter*, the range of ideas provided by this Charter will form the basis for health promotion explanation in this study.

Health promotion is a way of practice which, 30 years ago, started as marketing and selling and has now expanded to include strategies of enhancement and empowerment to acknowledge the effect of societal change (Catford 2004). It is a key investment and an essential element of health development (WHO 1998a). Some of the many theories forming and supporting health promotion practice will be described in the next section.

2.2.2 Theories of Health Promotion

Theories and frameworks underpinning the concept of health promotion range from those with a health, social, marketing or, in the case of capacity building, an administrative base. 'True' health promotion uses a combination of theories. This eclectic mix of theories will be examined to gain an understanding of the myriad available that can be used to understand health promotion and the scope of its practice.

In *Theory in a Nutshell: A practitioner's guide to commonly used theories in health promotion* (Nutbeam & Harris 1998), *Health Promotion Strategies and Models* (Egger et al. 2002) and *Health Promotion for Pharmacists* (Blenkinsopp et al. 2000), many health promotion theories are discussed. The various models which form the base for health promotion are summarised using the grouping devised and cited in Nutbeam (Nutbeam & Harris 1998):

Health Behaviour and Health Behaviour Change

- *Health Belief Model (Rosenstock 1974).* This model suggests that an individual will believe in an ability to carry out the recommended action and thus achieve a benefit. Change occurs when the perceived threats consisting of perceived susceptibility and seriousness, and the outcome expectations of perceived benefits and barriers to taking action, are sufficient to achieve an effect. The authors of this model acknowledged, in a 1984 review, that other factors such as social, economic and environmental conditions also influence health.

- *Theory of Reasoned Action and Planned Behaviour (Fishbein& Ajzen 1975).*

This theory proposes that beliefs and expectations form attitudes, which in turn shape an intention to change behaviour. This change will lead to an improved health outcome.

- *Protection-Motivation Theory (Rogers 1975).* This model used the Rosenstock's Health Belief Model and incorporates some aspects of the Social Learning Theory described below and developed two years later by Bandura. Protection-Motivation Theory introduced a coping appraisal by individuals for any perceived threat or ability to change.

- *The Theory of Trying (Bagozzi & Warshaw 1975).* A focus on goals set by individual behaviour choices is the source of this theory. Attitudes and the degree of probability of failure lead the individual to form an intention to 'try'. When this intention changes into an action, the individual then believes a positive health outcome may be achieved.

- *Social-Learning Theory Model (Bandura 1977).* This model focuses on expectations and incentives of society and uses this to encourage the individual to change. Thus the community environment influences the conversion of the individual's behaviour.

- *The Transtheoretical Approach/Stages of Change (Prochaska & DiClemente 1982).* The Stages of Change Model is widely used, especially in pharmacy practice, as behaviour modification is usually required. By using a circle, this model acknowledges that people can change but often relapse into former behaviour

patterns. The cycle consists of people moving in a continual loop, from those not ready to change, through contemplating, preparing, acting, maintaining and relapsing. People can move through this cycle several times or enter or leave at any point. Usually several attempts are made by individuals before any definitive change in behaviour is achieved (Prochaska & DiClemente, 1982, cited in Blenkinsopp et al. 2000; Bond 2000).

- *The Empowerment Model (Naidoo & Wills 1994).* This approach uses the health promoter as a facilitator encouraging change. The individual can then use critical reflection to modify values and beliefs.

These models of health and health behaviour focus on the importance of the individual's knowledge and beliefs of health. The influences of self-efficacy, social norms and social influences are also acknowledged. People are in different 'stages of change' at any one time. All of these factors, including social and environmental conditions, affect individuals considering an alteration in behaviour. However, there are other models of health promotion to explain changes in health status in communities to complement the above approaches.

Community Change and Community Action for Health

- *Community mobilisation (Rothwell 1987).* Rothwell described a series of models at community level which used concepts of locality development, social planning and social action to achieve community mobilisation. Locality development uses community capacity to define and solve community problems. Social planning uses the experts to develop solutions but is dependent on the community to actually identify problems and suggest solutions while social action

uses the community capacity to achieve a change. Community mobilisation is developed over time and it can have periods of activity and inactivity depending on the problem to be approached but it has the capability to achieve population change thereby benefiting health.

- *Diffusion of Innovation Theory (Rogers 1983).* This theory uses the process of diffusion to explain how an innovation such as an idea, change of practice or object is adopted over time through a variety of channels by a social system. It uses the notion of adopter categories to show change over time by a programme or intervention. Change innovators (2–3% of the population) and early adopters (10–15%) in turn motivate the early majority (30–35%) and the late majority (30–35%). However, the conservative laggards (10–20%) often actively resist, thus diminishing the effect of the programme and so reducing the return on effort. It has been found that the community often needs a role model or change agent to facilitate and accelerate this diffusion process to an entire population.

In summary, diffusion of ideas and practices allows the community to act collectively, thus overcoming some social, economic and environment determinants of health. Effective change agents and capacity to act collectively with others, both within the community and from outside, are necessary for those wishing to achieve change in community-identified health issues. Other strategies from outside the health field have been identified as necessary to realise positive health changes.

Communication Strategies to Promote Health

- *Communication Change Model (McGuire 1989).* This is a model designed to influence attitudes and behaviour. McGuire uses five 'communication inputs':

Source—Person, group or organisation;

Message—The what and how;

Channel—Medium through which the message is delivered;

Receiver—Target audience; and

Destination—Outcome.

By using the twelve steps of 'exposure, attention, interest, understanding, skills acquisition, attitude change, memorisation, recall, decision-making, behaviour change, reinforcement and maintenance', change can be achieved. This model is most useful for public campaigns.

- *Social Marketing Model (Kotler et al. 1989).* Social Marketing uses established marketing techniques to promote a product designed to benefit the individual or society rather than benefit the seller, as usually occurs in marketing systems.

Marketing strategies have significant value in health promotion activities. Matching the source, message, medium and receiver and allowing different methods of communication to be used help obtain a realistic defined outcome. Health promotion activities are more successful using a variety of approaches and the usefulness of these models cannot be underestimated. However, when health promotion projects are being conducted in a community yet another layer of organisational practice needs to be considered to achieve a change in health status.

Organisational Change and Health-Supportive Organisational Practices

- *Organisational Change (Goodman, Steckler & Kegler 1997).* A four-stage approach to organisational change was used in this model. The stages are 'awareness raising, adoption, implementation' and lastly, 'institutionalisation'. Because

organisations function at different levels, a change must be incorporated at all levels to be considered successful. Unless the process of organisational change is conducted with senior administrators becoming leaders in the strategy, it may not be successful.

- *Intersectoral Action (Harris, Wise & Hawe 1998).* This model acknowledges the need for organisations to work together to achieve change. They must also establish relationships to achieve goals that are planned, able to be evaluated and able to be sustainable.

Organisation core business can determine the effectiveness of health promotion programmes. Working with all levels within an organisation and supporting those involved is necessary for success and potential long-term maintenance. The influence of individuals, management and other organisations is a crucial factor consideration for the success of any activity. Health promotion strategies that use a holistic approach must incorporate the factors identified within these models to be effective. A yet higher level of influence, one of government and the media, also exists which impacts on health promotion within our communities. The following model exemplifies this area of health promotion.

Development and Implementation of Healthy Public Policy

- *Ecological Framework (Milio 1987).* This framework describes the key players who have a significant influence on healthy public policy and consequently health promotion approaches. Policy makers, policy influencers, the public and the media are influenced by social climate, policy development and interested parties. These aspects influence healthy public policy and force it to be dynamic and evolving.

Health promotion is a combination of health and social science and not just a medical science. The theories described in this section underpin all health promotion programmes. Successful multilevel interventions use a number of these models and are more powerful than single-track programmes. The influence of outside players in health promotion activities must be considered for the sustainability of any change. Catford (2004) described how health professionals could contribute by developing their skills in educational and health advocacy, working outwards and nurturing and enabling health promotion to occur. However, not all individual practitioners can operate at all levels of health promotion practice (Nutbeam & Harris 1998) as they do not have the position, capacity or knowledge of those factors influencing the environment. However, to achieve maximum benefit, practitioners must have an understanding of the influencing issues as demonstrated by these models.

2.2.3 Capacity Building

Capacity building within health promotion has been recently defined and acknowledged as an internal basis for safeguarding the programme or activity, yet it is a resource often hidden from those outside. Although capacity building is one aspect of the theory of organisational change and community collaboration, the process is quite distinct from those theories of changing health behaviour and community empowerment. However standardisation in definition of capacity building is often lacking in the literature (Ebbessen, Heath, Naylor & Anderson 2004). Hawe (Hawe, Noort, King & Jordans 1997) defined capacity building as developing health promotion skills and resources by building infrastructure, partnerships and organisational environments with problem-solving capability to

sustain programmes or ideally multiply the effects of that programme. Hawe, King, Noort, Jordans and Lloyd (2000) stated that this must occur at five different organisational levels: the individual; within health care teams or groups; within health organisations; across organisations and within and across the community.

Unfortunately, capacity building is not seen as a legitimate activity in various health promotion projects because it cannot be measured. Consequently, it is often kept secret (Ebbessen et al. 2004). The implications of this secrecy impact on quality control, guiding theory, practice ethics, peer support and worker morale. Funding mechanisms for future health promotion do not take capacity building into account (Hawe et al. 1997, Hawe et al. 2000) thus weakening the impact of potential health promotion activities.

Capacity building and lack of knowledge of this process therefore has implications for the pharmacy profession. The assumption made by this study is that the pharmacy profession is often a forgotten player in health promotion activities. If capacity building is kept secret within organisations, then intersectoral collaboration with external players, not previously included in health promotion activities, will not occur. The implications of this apparent secrecy in capacity building for the pharmacy profession will be examined further in this study.

2.3. Health Promotion in Pharmacy Practice

Health promotion is more than sticking up a poster in a window, but for too many pharmacists, this is the extent of their health promotion practice (Duncan 2002).

Despite the broad scope of practice and models of health promotion described previously, the actual practice of health promotion in the pharmacy literature is often narrowly defined and consequently the profession only embraces some if its available facets.

It will be shown that in this country, the terms 'health promotion' and 'health education' are often used interchangeably in the pharmacy literature, particularly in the *Professional Practice Standards* (PSA 2002) (Appendix 2.1, p. A-3), and *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b) (Appendix 2.3, p. A-13). The use of aspects of health promotion theory and practice in these documents is often complementary to those other activities expected by and of the profession. However, the role of the health professional, including the pharmacist, in health promotion, is usually one of education and advocacy (Catford 2004) or as an expert or specialist (Blenkinsopp et al. 2000; Todd 1992) but without the background instruction necessary to realise the full potential of a health promotion role in practice. The definition and dimensions of health promotion, as it applies to the profession, will be examined in the pharmacy literature, as well as in the foundation documentation endorsed by the professional bodies in Australia.

2.3.1 Dimensions and Definitions of Health Promotion

Within the pharmacy literature, (Blenkinsopp et al. 2000; PSA 2002, 2003b) health promotion is described using the definition provided by the *Ottawa Charter* (WHO 1986, 1997b, 1997c, 1998a), but the profession does not make use of the entire scope of practice provided by this Charter or its supporting documents. The terms 'health

promotion', 'health education' and 'pharmaceutical care' and 'primary health care' are often used interchangeably, despite the accepted WHO definitions used to describe health promotion in the introduction and glossaries of the current guiding documents for the profession, the *Professional Practice Standards* and *Competency Standards for Pharmacists in Australia 2003.* The Pharmaceutical Society of Australia *Competency Standards for Pharmacists in Australia 2003* defines health promotion as: '... a mediating strategy between people and their environments, combining personal choice with social responsibility for health to create a healthier future.' (PSA 2003, p. 7).

The *Professional Practice Standards* (2002) uses the *Ottawa Charter* and *Jakarta Declaration* as additional reading material, while the introduction rephrases their concepts. An understanding of the scope, use of theoretical models and practice examples show that a restricted awareness of health promotion theory is incorporated in these standards. A limited role for the profession in education and information provision is the key message offered by the various standards concerned with health promotion.

Despite the myriad definitions and the range of theoretical models for health promotion practice, the pharmacy literature itself is usually confined to the least complex and best-tested psychosocial models of health behaviour and health behaviour change. Although some mention is made of Milio's health policy framework model, Blenkinsopp et al. (2000) in *Health Promotion for Pharmacists* concentrate on using examples of the health behaviour definitions by using the models of, Prochaska and DiClemente and that of Naidoo and Wills, as previously discussed (Chapter 2, pp. 32–33).

In pharmacy practice the most common model of health promotion used to explain change in behaviour is the Transtheoretical Approach or Behaviour Change Model of Prochaska and DiClemente (Prochaska and DiClemente 1982, Blenkinsopp et al 2000, Bond 2003). This model is used because it fits neatly into the day-to-day practice within a community or hospital pharmacy. While this model can easily explain the process of smoking cessation or weight reduction programmes, where multiple attempts are common, the different models of health promotion available provide for a wider potential understanding and input by the pharmacy profession into the community; not just individual exchanges. Prerequisites for health and the many theories of communication, community action, organisational change and public policy all impact on a successful change by an individual or society. Pharmacists are seen as the experts encouraging change (Todd 1992), but a limited knowledge of the health promotion theory options provided by may restrict practice.

In Great Britain, to formalise the definitions and dimensions of health promotion, the Royal Pharmaceutical Society in 1998 developed the document entitled 'Guidance for the development of health promotion by community pharmacists' (Blenkinsopp et al. 2000). Through this document, the Royal Pharmaceutical Society identified two levels of health promotion practice:

Level 1 (Generalist)

- Focuses on the pharmacist encouraging healthy behaviour;
- There is an area in pharmacy for health promotion literature and information; and
- Pharmacists and staff use leaflets, simple health promotion advice when handing out prescriptions, making sales and advising about treating symptoms.

Examples of generalist health promotion by community pharmacists included taking part in local and national health promotion events, and giving evidence-based health promotion advice.

Level 2 (Specialist and Pro-active)

- 'In addition to level one the pharmacist actively seeks opportunities to promote health. If appropriate, they will identify the stage of change a person is at for a particular behaviour and offer individualized advice and ongoing support'. (Blenkinsopp et al. 2000, pp. 84–85). Again, the Stages of Change model was used for active advice on health promotion practice in pharmacy and no mention was made of the range of options for practice available under the *Ottawa Charter*.

As pharmacy is often on the periphery of community-based health promotion activity the concept of capacity building is not usually included in pharmacy literature. The organisational constraints and ability to build capacity into programmes is something not usually utilised, but is present in more general health promotion literature. Pharmacists have been surveyed in Canada (Nova Scotia) as part of a capacity-building evaluation of community projects but no pharmacy-specific results were described by Joffres, Heath, Farquharson, Barkhouse, Hood, Latter and Maclean (2004) or after personal communication (Joffres 2004). If other health professionals hide capacity building as a means of protection of their project, pharmacy as a profession can miss out on any participation because it is unfamiliar with the concept, not involved as the initiator, or part of the planning of the community activity or project.

The profession in Australia recently embraced the concept of 'Pharmaceutical Care', which is defined as medication management to improve or maintain a patient's

quality of life (FIP 1998). This concept is distinct from health promotion. 'Pharmaceutical care' is a process that aims to prevent or solve medicine- and health-related problems to thus achieve a positive clinical outcome using therapy plans with sufficient information to achieve these goals. Maguire (2001) challenged pharmacy to develop practice to include lifestyle needs and he argued that pharmacy does not understand health promotion and must move beyond pharmaceutical care.

'Primary health care' is another term narrowly interpreted in the pharmacy literature and examples will be provided from the *National Pharmacy Database Project* study by Berbatis et al. (2003). Confusion regarding the terminology 'primary health care', 'health promotion' and 'pharmaceutical care' is compounded in the pharmacy literature. Maguire (2002) used an example, purported to be 'pharmaceutical care', of an asthma prevention study, which did not consider the smoking status of its subjects. To facilitate understanding, he expanded on the usual definitions of health promotion and he identified 'Primary Care Health Promotion Practice' as: 'The active and evidence-based promotion of health, patient empowerment and the facilitation of lifestyle changes to ensure maintenance of good health, prevention of illness and assurance of disease management' (Maguire 2001, 2002, p. 20).

This definition may be one for the pharmacy profession in Australia to embrace as it uses the language familiar to the profession, and gives the profession a guide for practice change. However, for the most part the profession is still both individual patient- and medically-focused.

Catford (2004) described health promotion thirty years ago as marketing and selling health. This is still seen today in the pharmacy profession. Examples found of

health promotion in the pharmacy literature were usually associated with the first dimensional education and information model of the 1970s as described by Catford. With a health education and information focus the current professional standards and guidelines continue to adopt this approach today as will be shown in the following evaluation of professional guidelines (Blenkinsopp et al. 2000; PSA, 2002; 2003b; Pharmacy Guild of Australia (PGA) 2001).

2.3.2 Pharmaceutical Standards and Health Promotion

The International Pharmacy Federation (FIP) instructed its members to develop professional practice standards in the Tokyo Declaration of 1993 (PSA 2002). The professional pharmacy body in Australia which devised these documents is the Pharmaceutical Society of Australia. The pharmacy profession thus uses the *Professional Practice Standards* and the additional document, the *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b) to set minimum levels for the knowledge and skills of entry-level practising pharmacists in Australia.

Background of the Pharmaceutical Society of Australia

Australian pharmacy organisations include the Pharmaceutical Society of Australia (PSA) (representing all pharmacists but with the majority of members being community pharmacists), Society of Hospital Pharmacists of Australia (SHPA) (with a primary membership of hospital pharmacists), The Pharmacy Guild of Australia (PGA) (consisting of full members who own community pharmacies and their associated industrial and practice issues), the Australian College of Pharmacy Practice (ACPP) (an educational college of community pharmacy practice recently

amalgamated with the Australian Institute of Pharmacy Management (AIPM) and now called the *Australian College of Pharmacy Practice & Management* (ACP)), the Australian Association of Consultant Pharmacists (AACP) (representing accredited consultant pharmacists who usually undertake nursing home and domiciliary medication management reviews) and the Association of Professional Engineers, Scientists and Managers of Australia (APESMA) (representing the industrial interests of employed pharmacists after merging with the Salaried Pharmacists Association of Australia).

The national body representing all pharmacists, the Pharmaceutical Society of Australia was in reality only formed 25 years ago. Member states include New South Wales, Queensland, South Australia, Tasmania and Victoria. Western Australia is an affiliate member as the Pharmacy Board, which registers pharmacists and the Society are still part of the same organisation in that state. In other states, the Society and Registration Boards are separate entities. Most state-based Pharmaceutical Societies have been in operation for over 100 years and began training pharmacists before colleges and universities took over this task.

As a united body, the PSA is now able to set practice standards for the profession. 'Professional Standards' are described as systems, procedures and information compared to 'Competency Standards', which are described as skills, attitudes and attributes (PSA 2003b). These standards were examined to ascertain if the principles of health promotion were upheld for the pharmacy profession.

Background of PSA Standards

The initial *Pharmacy Practice Handbook* published in 1998 was followed by the first edition of *Professional Practice Standards* (PSA 1999) with the second and current edition, published in 2002 (PSA 2002). The PSA developed the standards with input from other pharmacy organisations, constituents, consumers and government. The main change to the later edition was the introduction of recording and evaluation criteria for activities undertaken. The Australian Society of Hospital Pharmacy (SHPA) also has its own professional standards for specific areas of practice but refers to the *Professional Practice Standards* for general practice. Consequently, the *Professional Practice Standards* produced by the PSA, will be discussed because these standards can represent the whole of the profession as they cover both community and hospital pharmacy practice.

The context explained in the introduction to the Standards states:

> 'It is now generally agreed the practice of pharmacy must be patient-centred and focus in improving health outcomes. The application of professional practice standards is a tangible means by which the profession can demonstrate its commitment to ensuring that health care services and products delivered to consumers are of reliable quality.' (PSA 2002, p. 5)

Using the format described in the *Professional Practice Standards*, 2002, each standard contains a brief description of the service, with the scope of the standard and appropriate cross-referencing to other standards. The standard itself consists of a 'standard statement', which clarifies the qualities required of a service to ensure the desired level of performance or results. Criteria are used to describe the components or elements of the standard together with one or several indicators. These indicators

provide the evidence or measure of compliance with each criterion. Explanatory footnotes, providing guidance for users of the standard, consist of additional information relevant to the standard. Self-assessment tools with each standard enable the user to nominate whether or not the standard is met, unmet or not applicable to their own practice.

The Health Promotion Standard

The first standard listed in the current *Professional Practice Standards* is that of Health Promotion (Appendix 2.1, p. A-3, Appendix 2.2, p. A-7). Criteria and indicators to allow evaluation of activities were added in this 2002 version (PSA 2002). The rest is unchanged from the initial version of this standard in 1999 (PSA 1999). This first standard on health promotion was specifically examined in light of the previous explanations of health promotion theory and practice.

The *Health Promotion Standard* states that: 'The pharmacist actively promotes health in the community and provides information on the health conditions and their management.' (PSA 2002, p. 7).

The scope of this standard narrowly defines health promotion as health education to 'improve health or prevent ill health'. It also states that health promotion is the provision of information which 'may occur either (i) independently from the supply of a medicine, or (ii) at the time of counselling a patient on a dispensed medicine or when recommending a non-prescription medicine' (PSA 2002, p. 7).

There are six individual criteria, each with a set of indicators, which guide this standard. The criteria will be discussed further to show how narrowly health

promotion is interpreted considering the depth of participation available using the theories on hand.

Criterion 1: The pharmacist is a resource for individuals and community groups for health education information. Participation in professional development, access to resources and accessibility of the pharmacist are the indicators for this criterion. Pharmacists can improve their understanding of health promotion though professional development. This criterion interprets these activities as the means by which the pharmacist enhances his or her ability to observe behaviour changes and help customers to make decisions. The other indicators for this criterion concentrate on the pharmacist having accessible health education resources and as a provider of health education to both patients and community groups. Pharmacists are encouraged to network and use community groups as a source of health education. Thus this criterion states that the pharmacist is a resource in health education, not a health promotion resource.

Criterion 2: The pharmacist provides health education at individual and community level. Health education has been substituted for health promotion in this criterion immediately reducing the scope of practice that could be achieved. The first three indicators deal with the pharmacist providing health information to individual patients or carers. The fourth indicator states that the pharmacist actively participates in health education in the community. Health education in the community is defined as covering a board range of activities such as participation in campaigns, distribution of newsletters, or presentations. A pharmacist is able to comply with this last indicator without doing all of the activities suggested or leaving the pharmacy itself.

Criterion 3: The pharmacist actively participates in developing health promotion skills of individuals engaged in relevant activities. This criterion requires the pharmacist be an educator to pharmacy staff and other groups or individuals undertaking a health promotion activity. It suggests the pharmacist can participate in 'train the trainer' programmes developed to 'train individuals in health promotion issues'. The pharmacist may simply interpret this activity as information, given to another, to conduct the activity, and need not participate himself or herself. 'Health promotion' is used in the wording of this criterion statement, but 'health education' is the wording used in the indicators. Again, possible confusion on the part of the pharmacist could restrict possible participation in health promotion activities.

Criterion 4: The pharmacist works in partnership with health organisations, community groups and other health professionals to promote health. Health organisations cited in this criterion include the Cancer Council or Diabetes Australia and health departments at federal, state and local area health services, which promote health. The indicators require the pharmacist to develop strategic links, negotiate a role in the partner organisations and participate in health campaigns. As pharmacy professional organisations undertake these activities at federal and state level, the pharmacist can still meet the criterion without necessarily participating in any activities, especially at a local level. Despite the criterion statement listing community groups as partners, the additional explanatory notes only include health organisations. Potential links with community groups that are not health-based are missing, thus restricting a contribution by the profession.

Criterion 5: The pharmacist has a record of health education and health promotion activities provided. Again, the indicators in this criterion are focused on activities

within the pharmacy specifying education, information given to pharmacy staff and participation by pharmacy staff in health education and health promotion activities. Examples of the records to be kept with each activity include pharmacist/staff involvement; type of activity such as leaflets; in-shop video; public presentation; topic; target audience; date; associated with national or local health campaign; cost; and feedback. Thus, participation in health promotion activities need not include the pharmacist, yet the pharmacist can still comply with this criterion.

Criterion 6: The pharmacist has a systematic approach to the improvement of their health promotion activities. This criterion was added in 2002 to include an evaluation mechanism as required for continued involvement in the Quality Care Pharmacy Program of quality assurance (QCPP) (PGA 2001) (Appendix 2.2, A-7), for community pharmacies. Evaluation and feedback of health promotion activities provided by the pharmacy are the indicators for this criterion. Despite the wording 'health promotion' used in this criterion, 'health education' is the focus in the explanatory notes. Examples such as health campaigns or provision of educational material provided as a guide, demonstrate that all pharmacists participate in some health promotion, even though it is usually called health education.

Other Standards Using Health Promotion Terminology

The Health Promotion standard also refers to the standard on Patient Counselling. However in this standard, there is no specific mention referring the reader back to the Health Promotion standard. The Patient Counselling standard focuses on interactions between pharmacist and patient on the subjects of medications and devices to ensure safe and effective use.

In using the latest edition of pharmacy *Professional Practice Standards* (2002), the words 'health promotion' are not used in many standards which could be thought to contain aspects of health promotion. These specific standards will be discussed later. The only other standard using the words health promotion in the scope of practice is that of Liaison Pharmacy. In this standard, the pharmacist is defined as one who works with those discharged from hospital, providing medication management in liaison with other health care workers to selected patients in the community. The scope indicates that some activities may be equivalent to health promotion, and refers the reader to the Health Promotion standard.

Health promotion is not used as an overarching method of practice but is separated as another service provided by community pharmacies. Health promotion theory is the base for many other standards but the wording does not acknowledge this. Examples of other standards where the words 'health promotion' are not used include: Provision of Pharmacist Only and Pharmacy Medicines in Community Pharmacy, Blood Pressure Measurement in Pharmacies, Blood Glucose Measurement in Pharmacies and Blood Cholesterol Measurement in Pharmacies.

Health promotion is, however, listed as an activity within the Smoking Cessation Service, Methadone Service and Needle and Syringe Program standards. The words 'health promotion' are mentioned in the standard on the Smoking Cessation Service in the eighth criterion stating the pharmacist assists the patient with general health and pharmaceutical information. One of the indicators suggests that the pharmacist has access to a range of health promotion and information resources. On reviewing the footnotes, the assumption is that health promotion resources are information on lifestyle topics such as diet, physical activity and other risk factors. The standard on

Methadone Services uses the words 'health promotion' in the eighth criterion for provision of general health and medication information. Access to health promotion resources is listed in the first indicator of this criterion. In the explanatory notes, information on health promotion is recorded without explanation of what these resources might be. The Needle and Syringe Program standard states in the sixth criterion that the pharmacist again assists with general health and pharmaceutical information. Part of this information is defined as 'health promotion and harm reduction information' and the examples given include information on general health, how to reduce harm, safer injecting practices, and nutrition and lifestyle issues. No distinction is made as to which information is health promotion and which is harm reduction. It could be argued they are all facets of health promotion as previously defined.

As can be seen from the examples provided, the only link to the Health Promotion standard is the use of the words 'health promotion'. Most of the other standards examined appear to concentrate on health education and information provision of general health resources and call this health promotion. This type of activity is focused within the community pharmacy itself with some references to outside participation. Many standards, which could be considered as examples of health promotion, do not take advantage of the theoretical health promotion models described previously. With the assessment of 'met/unmet or not applicable', pharmacists are able to comply with the indicators provided without participation in any activities outside the pharmacy itself. Indeed, some may mark 'not applicable' and still comply with all standards without appreciating the broad practice opportunities in health promotion even within a pharmacy setting.

Health promotion is a way of practice or working but the term is used within the professional standards as an additional activity. All other standards, except that of Liaison Pharmacy, describe specific activities within the pharmacy. The assumption of information on health and lifestyle constituting health promotion in the standards is at odds with the broad definitions of health promotion. The Health Promotion standard itself displays the slim interpretation of health promotion theory by stating that information on health conditions and their management is the scope of practice for the pharmacy profession. The *Competency Standards for Pharmacists in Australia 2003*, which will be discussed in the next section, further enforce this misunderstanding of health promotion by the profession.

2.3.3 Pharmacist Competency Standards

The current *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b) developed from the previous competency standards, which were written between 1992 and 1994 and entitled 'Competency Standards for Entry-Level Pharmacists in Australia'. Many pharmacy organisations in Australia had input into the original standards and they were reviewed twice, in 1996 and 2001. The second review was approved at the Australian Pharmacy Conference, Melbourne, in 2001. The PSA developed the current standards in 2003 in a project entitled 'Enhancing the value of pharmacists through augmented competency standards and targeted professional standards'. These were endorsed by the profession and published in November 2003. The current standards are quite different from the previous standards in format and wording (Appendix 2.3, p. A-13).

The competency standards are those standards that the profession expects of a newly-qualified pharmacist and describes the expected skill level, attitudes and attributes (PSA 2003b). This document interprets professional standards as systems, procedures and information, which have been discussed previously. The competency standards are divided into eight functional areas of pharmacy practice. Each area is made up of units of competency, which are further divided into elements. Each element consists of essential or supplementary performance criteria. Supplementary performance criteria are described as only for those with an enhanced skill base. These competency standards will be reviewed to ascertain whether they support the practice of health promotion.

Health promotion is defined by the *Competency Standards for Pharmacists in Australia 2003*, in its glossary as a 'mediating strategy between people and their environments to create a healthier future' (Appendix 2.3, p. A-13) (PSA 2003b, p. 8). Not all functional areas include reference to health promotion. The functional areas of practice are as follows, with additional comments if reference to 'health promotion' is made:

Functional Area 1: Practise pharmacy in a professional and ethical manner.

Functional Area 2: Manage work issues and interpersonal relationships in pharmacy practice.

Functional Area 3: Promote and contribute to optimal use of medicines.

Functional Area 4: Dispense medicines.

Functional Area 5: Prepare pharmaceutical products.

In the context of these standards, all functional areas apply to the practice of pharmacy in a pharmacy setting only. There is no mention of health promotion or

examples to substantiate its definition in the glossary. Having said this, in *Functional Area 1*, pharmacists are expected to practise life-long professional learning and contribute to the development of others, which can be construed as development of personal skills; one of the action areas described by the *Ottawa Charter*. In the second functional area, communication skills for a variety of audiences is expected. Group skills were included in the June 2003 draft (PSA 2003a, p. 29) but removed from the final version.

The principles of health promotion practice are included within the following functional areas:

Functional Area 6: Provide primary health care. Within this functional area the more traditional role of pharmacists is described as one of 'promoting good health in the community'. This is achieved by participating in public health campaigns and by providing primary health care, including health and lifestyle advice. Information and advice when over-the-counter medicines or devices are selected by the customer or recommended by the pharmacist is also part of the service provided within this functional area. Advisable performance criteria include communication skills and maintenance of appropriate interprofessional networks essential for delivery of primary health care and health promotion services. In the element on provision of information and participation in public health strategies, supplementary performance criteria include public health education and awareness-raising campaigns, screening, and identification of 'health promotion information needs of the community'. The elements encourage the pharmacist to deliver information on disease and early detection to community groups and promote the role of the pharmacist in local health

promotion activities. However, it appears both the words 'health promotion' and 'health education' are used interchangeably in this competency unit.

Functional Area 7: Provide medicines and health information and education. Unit 3 explains that the role of the pharmacist is to educate members of the general public as well as individuals. Although the draft version of the competency standards included the application of presentation skills and an ability to use electronic aids in presentations on medicines and health information, this was not included as strongly in the final document (PSA 2003b). This supplementary performance criteria is somewhat diluted, in the final document, to the use of communication and presentation skills to present medicine and health information, thus restricting potential practice outside the pharmacy setting.

Functional Area 8: Apply organisational skills in the practice of pharmacy. Again, this relates to practice within a pharmacy itself and there is no mention of health promotion.

The Competency Standards from Canada, called 'Model Standards of Practice for Canadian Pharmacists' and produced by the National Association of Pharmacy Regulatory Authority (NAPRA), (NAPRA 2004) were reviewed and compared to the Australian standards for health promotion content. The Canadian standards were patient-focused and centred on medication provision and the legalities of supply thus when compared to Australian practice providing a more narrow vision for pharmacy practice in Canada.

The *Competency Standards for Pharmacists in Australia 2003* usually refers to individual interventions and education while dictating the degree of competence required of an entry-level pharmacist. Although health promotion is defined in the glossary of this document, its principles are not fully identified as a base for practice within the document itself. Aspects of health promotion practice are only used in a few of the functional areas, usually as an additional service provided by the pharmacist, contributing to the narrow vision of health promotion held by the profession.

2.4 Pharmacy Workforce and Rural Issues in Australia

Pharmacists are in short supply and will continue to be in demand past 2010 (HCI 2003). If health promotion is to be considered as a way of working, a pharmacist shortage has implications for any proposed change to practice, particularly in rural areas, where there is more demand on the pharmacy workforce. In this section, the many factors that impact on the profession today and professional trends that are currently experienced will be examined. Aspects of the future trends within the pharmacy profession, both in Australia and overseas, will be discussed. Specific factors affecting rural pharmacists and the nature of rural practice will be reviewed. Demographic statistics of rural pharmacists were studied to determine baseline data for this study. The Rural and Remote and Metropolitan Areas (RRMA), classification system is used to delineate recognised rural classifications used in this section with the specific area classification shown in italics and further described in Appendix 5.1, p. A-62. These descriptions of the rural pharmacy workforce underpinned the investigations to be carried out by this study.

This analysis of the pharmacy workforce is essential because health promotion is a way of working, not just an additional activity. To examine the extent of participation in health promotion practice by pharmacists and the context in which this could be provided, it is necessary to understand the current and future issues affecting the pharmacy workforce, both in Australia and overseas.

2.4.1 Analysis of the Pharmacy Workforce

In 1999, the total number of registered pharmacists in Australia was 18 853, of whom 6.5% had multiple state registrations. Of these, 86.1%, can be classed as the pharmacy labour force of 15 176, of which 14 747 were currently working in pharmacy. This equates to a workforce of 12 058 full-time equivalent (FTE) pharmacists (AIHW 2003). The rest are employed elsewhere, not looking for work, or overseas. However, the report of *A Study of the Demand and Supply of Pharmacists 2000–2010*, commissioned by the Pharmacy Guild of Australia (HCI 2003), which used a sample of practitioners, compared to the previous report (AIHW 2003), which attempted to sample all practitioners, suggested that the pharmacist workforce in 2000 would be 11 188, an 8% decrease compared to the figure quoted by *Pharmacy Labour Force to 2001* (HCI 2003). Using current demand figures from this Health Care Intelligence report, the number of full-time equivalent pharmacists required will increase to between 13 594 and 14 147 by 2010. It is also predicted by using various combinations of low and high demand for future pharmacy services that between 12 700 to 20 000 pharmacists will be required by 2010 (HCI 2003).

Despite an increase in pharmacy school enrolments of 4% over the past 15 years, the annual attrition for the profession is 7%. With the current demand, education of new pharmacy graduates (1997–2010) as well as those from overseas who are undergoing the prescribed registration process, there is a 6.6% increase in registrations per year (HCI 2003). Together with the changing nature of the pharmacy workforce, discussed later, it appears that there are no strategies currently in place to meet the predicted demand even if services remain static.

When asked to list their main place of employment by the *Pharmacy Labour Force to 2001* survey, 80.2% of respondents said they were in community practice, 14.2% in hospital practice and 5.6% in other pharmacy occupations such as industry, administration, teacher/educator or other. Of those in community practice, 25.6% were sole proprietors, 19.4% are partner-proprietors, 28.5% are pharmacist-in-charge, 9.8% are permanent assistants and 16.7% worked as a reliever (AIHW 2003, p. 5).

The number of community pharmacies increased from 4058 (excluding hospitals and dispensing doctors) to 4926 in 2002, (HCI 2003) a growth of 12.5%. However Berbatis et al. (2003, p. 9), found that there were just 4447 approved pharmacies operating in 2002 applying the criteria developed for his survey.

In 2002 there were 140 pharmacies in Tasmania, a number that has remained steady over the past 4 years (-2.1% decrease from 1995–2002). By comparison, in Victoria there were 1159 pharmacies in 2002, a 4.8% decrease during the period 1995–2002 (AIHW 2003, p. 9).

Pharmacies are usually located in a shopping strip (41.2%), and are open 6.18 days per week and for 55 hours per week. Half are members of banner groups (e.g. Amcal, Guardian) and are QCPP (Quality Care Pharmacy Program of quality assurance) (PGA 2001) accredited. A little over half have one owner and 10.5% have three owners. Nearly 40% have owners who are over 50 years old (Berbatis et al. 2003, p. 8).

In Tasmania, the Australian Institute of Health and Welfare, (2003) provided available figures for pharmacists in practice. This survey, one of a series, was last undertaken in Tasmania and Victoria towards the end of 1998, and in other states in 1999, and finally published in 2003. The average age for a pharmacist in Australia, increased from 45.1 years in 1994 to 46.1 years in 1999 (average age females 41.7, males 50.0) (AIHW 2003, p. 9). The average age of pharmacists in Tasmania has dropped slightly to 43.6 years (44.3 community and 34.0 hospital) from 46.3 years in 1996 (AIHW 2003, p. 25). Tasmania has more female pharmacists (48.5%) when compared to the national average of 46.9%. Overall, the 46.9% of female pharmacists are more likely to work in hospitals and clinics (69.9%), and industry (65.9%), while 59.7% are in other occupations such as education or administration (AIHW 2003, p. 9). Female pharmacists make up a greater proportion of the younger pharmacy workforce, as over 60% are younger than 45 years compared to 34.1% of males. Hospital and clinical pharmacists tended to be younger than community pharmacists. Conversely there are 44.1% of males over 55 compared to 16.1% of females (AIHW 2003, p. 9).

However, female pharmacists make up only 42.3% of the community pharmacy workforce (AIHW 2003, p. 9). They comprise only one-fifth of proprietors and one-

quarter of partner–proprietors. Women are more likely to be permanent assistants (68.1%) or relievers (61.4%) and are more likely to work part-time (46.7%, compared to 21.5% men). Female pharmacists worked an average of 32.8 hours while males worked 41.9 hours per week (AIHW 2003, p. 12). Fifty-six percent of all pharmacists in all work areas worked 40 or more hours per week while 6.9% worked 60 or more hours per week. However on average, community pharmacists worked 38.2 hours while other employed pharmacists worked 38.8 hours (AIHW 2003, p. 12). Community business owners and managers have a greater tendency to work full-time and Berbatis, et al. found that all pharmacists spend at least three-quarters of their time in the dispensary (2003, p. 8).

The implication for the pharmacy workforce in the next 10 years from the expected retirement of many male pharmacists is expected to be significant, especially considering that female pharmacists have different work patterns and currently make up a smaller proportion of pharmacy ownership (HCI 2003, p. 44).

Professional Trends

A number of issues, both from within and from outside the profession, contribute to the potential significant change in the ways in which pharmacists work. These include the use of technicians, (HCI 2003) feminisation, an ageing community pharmacy workforce, organisation of health services, the impact of diminution of Pharmacy Only (S2) and Pharmacist Only (S3) medicine control and the subsequent pressure of supermarkets, pharmacy professional standards and the introduction and increase of cognitive service such as medication reviews (HCI 2003). Specific differences in pharmacy services in the past few years include the introduction and expansion of the following programmes to support these initiatives. The Quality

Care Pharmacy Program (QCPP) of quality assurance within the community pharmacy setting, Medication Management Reviews (MMR) and other clinical services in nursing homes and Home Medication Reviews (HMR) have placed an additional strain upon pharmacists' availability but have provided opportunities for others. The pressure relates to both replacement of pharmacists whose primary position is within a community pharmacy as well as to maintenance of these new services. The pharmacist also has to undergo considerable study to received additional qualifications in order to complete these tasks. However these options are challenging for the profession and several projects were conducted to promote change in the workplace to accommodate these new opportunities (HCI 2003) outside the traditional pharmacy setting.

Overlaid on this change and potential change are sectorial issues within the various arms of the profession; that is, community, hospital, industry and education, which force early career path choices with subsequent specific professional expenditure. These sectorial issues lead to segregation of the profession and a multitude of professional organisations representing each sector. Eighty per cent of pharmacists practice in community pharmacy while fourteen per cent practice in hospital pharmacy. However, there is often not much crossover between sectors, despite support for this option (HCI 2003; Peterson 1999). Graduates make decisions about their career paths and, once embedded, pharmacists do not tend to move between the different arms of the profession, particularly from community to hospital (Peterson 1999). Additionally as can be seen on pp 45–6 in this chapter, the pharmacy profession itself is represented by different organisations, each with its own specific agenda and restricted membership, which further reinforces this segmentation of the profession. From a practitioner's perspective, each additional practice option usually

investment of considerable time to comply with the initial study requirements and continuing study to maintain currency. There are cost imposts for the pharmacist who also has to be a registered member of the specific national professional organisation so as to continue to practice, in addition to the usual state-based registration fees. Many pharmacists pay these costs themselves, but the challenge of practice change is the personal driving force.

Despite the profession's self-imposed restraints of practice change, pharmacists are still motivated to continue in this career because of job satisfaction, good income, flexible hours, good working conditions and access to continuing education, although many would like more work. However, some pharmacists also felt an obligation to keep working because of staff shortages (HCI 2003). Also in this same study, it was proposed that industrial issues were not a driver to entice non-practising pharmacists to return to the workforce. Other factors that could have an impact on the future of the pharmacy profession are access to funds by young pharmacists to buy their own pharmacies, student expectation and reality-practice gap (the differences between expectations and actual practice), career change and options for making careers rewarding and the cost of employing pharmacists (HCI 2003). Despite motivators to continue to practise, 7% of pharmacists leave the workforce eacn year and factors facing the profession must be addressed to maintain professional numbers of practising pharmacists (HCI 2003; Peterson 1999).

Encouraging transition between community and hospital settings is an option for the future of the profession (HCI 2003; Peterson 1999). Pharmacy all-rounders who are versatile and possess skills for many practice options are needed for the future of the profession. Peterson (1999), encouraged graduates to gain a breadth of experience

both for themselves and the profession they serve. Also, he believes that as a profession pharmacists should seek out and learn from role models. Community and hospital pharmacy are often isolated from one another but diversity in practice is strength and specialisations must not occur at the expense of all-rounders (Peterson, 1999). Strategies are also needed to retain female pharmacists (HCI 2003) as changes in work patterns will occur over time due to the increased proportion of female pharmacists in the profession.

Overseas

Pharmacists are in short supply worldwide. In Great Britain, community pharmacy has a shortage of pharmacists and there is a heavy reliance on locum pharmacists and pharmacists older then the normal retirement age. The report *A Vision for Pharmacy in the New NHS* (Department of Health U.K. 2003) stated that pharmacists need to change practice and take a more strategic approach to health needs in their local community.

In the United States, Walton and Cooksey (2001), studied differences in part-time status and employment setting for male and female pharmacists looking at data from 1979–1998. In their study, part-time was defined as 35 hours or fewer per week and half-time was defined as less than 20 hours per week. This compares to the Australian Health Care Intelligence Pty Ltd workforce survey where full-time is defined as 35 or 38 hours per week (HCI 2003). In the U.S. female pharmacists were four times as likely as males pharmacists to work part-time especially if they had children younger than 18 years old. Overall women worked 84% of the weekly hours men worked, which is not too dissimilar to Australia where women worked 32.8 hours which is 78% of the 41.9 hours men worked. Women in the U.S. are

more likely to work in the hospital industry, which is also similar to findings from Australia. Older pharmacists, both male and female were more likely to work part-time and less likely to work in hospitals.

Walton and Cooksey (2001) stated a continued high demand for pharmacists and factors included growth in demand for prescription medicines, market expansions in the chain pharmacy industry, career opportunities in non-traditional settings and a growing number of women in pharmacy. The Health Care Intelligence Pty Ltd report of 2002 (HCI 2003) reviewed the demand for pharmacists in the United States and concluded the shortage was evidenced by a greater number of women with work patterns of shorter hours; difficulties in hiring and increased vacancy rates; an increase in demand for services and expansion of roles and professional opportunities; increase in demand for prescriptions; changes in education opportunities to allow study for a doctorate of pharmacy; a decline in number of graduates; and competition. Increased opening hours of pharmacies also may have contributed to the pharmacist shortage (HCI 2003). Overlaying these factors is the problem of increasing stress endangering the profession as the business role conflicts with the professional role of the pharmacist (Mott, Doucette, Gaither, Pederson & Schommer 2004). Thus changing opportunities within the profession, current service provision practice, external economic pressures and role definition contribute to professional trends and demands of current practising pharmacists.

2.4.2 The Rural Setting

There are significant concerns in rural Australia to ensure adequate pharmacy services, due to the age of the workforce and staff shortages. Rural areas usually have an older pharmacist workforce working longer hours. The various categories of rural and remote areas record there are only half the number of pharmacists in comparison to *capital cities* and *large rural centres* (RRMA Rural Classification, Appendix 5.1, pp. A-62–64). Services provided are diverse (Mahoney 1997), but not quite as diverse as larger pharmacies in higher population areas (Berbatis et al. 2003). The Rural and Remote Pharmacy Workforce Program (PGA 2004) has a number of initiatives to support pharmacists in these areas, such as an emergency locum service; conference and professional development support; isolation, maintenance and succession allowances; but the impact of these schemes is yet to be measured. Therefore, the ability of the rural sector to take advantage of new initiatives in professional practice is compromised because of lack of available pharmacists.

This study investigated whether the rural setting impacts on participation in health promotion activities. The health status of people in rural and remote Australia is acknowledged to be worse than that of people in metropolitan areas, and access to health services in rural areas including pharmacists is more difficult (Humphreys 1999; Humphreys, Rolley & Weinand 1993; Wilkinson & Blue 2002). Strasser, Harvey and Burley (1994), identified the first three requirements of a health service in a rural community as a doctor, a hospital and a pharmacy. The most frequently used health services in order are doctor, pharmacy, dentist and hospital.

Rural practice is acknowledged within the profession as being different from metropolitan practice (Mahoney 1993, 1997). Barriers to rural practice include professional isolation and lack of locum availability, especially in emergencies. The now disbanded Isolated Pharmacists' Association was instrumental in having these issues addressed by the Rural and Remote Pharmacy Workforce Program (PGA 2004). In surveys conducted in the early 1990s in Australia, Mahoney (Mahoney 1993, 1997) gave a demographic analysis of a pharmacist in a one-pharmacy town. The pharmacist there has been in the community for 15 years, holds or has held positions on hospital boards but does not provide sessional pharmacy service to the hospital, though frequently is asked to assist. The pharmacist is committed to stay in the community but plans to retire or move for educational reasons for children in the next 5 years. The pharmacy itself is 45 kilometres from another pharmacy, open every day, located in the centre of town and provides a coordinating service and supplementary services for health professionals (Berbatis et al. 2003; Mahoney, 1993, 1997). These additional services make rural practice different from city practice where there are more available health professionals.

Compared to the national average of 25.6%, 43.3% of pharmacists in *remote areas* of Australia are sole proprietors and in *other remote areas* 54.4% are sole proprietors. However, only 20.9% of pharmacists in *large rural centres* are sole proprietors as most pharmacies have absentee owners (AIHW 2003, p. 12). In most locations, female owners make up about 20% of the total, except in *other remote areas* where women own 37.3% of pharmacies. In *remote centres,* women make up 25–30% of partner–proprietors thus confirming the under-representation of women in pharmacy ownership.

In 1999 the pharmacist's national average distribution was 77.7 per 100 000 people. While in *capital cities* there were 86.6 pharmacists per 100 000 people and 81.1 in *large rural centres,* this ratio was only 38.4 per 100 000 people in *remote areas* and 30.6 in *other remote* areas (AIHW 2003, p. 10). More pharmacists under the age of 30 practise in *capital cities* and *remote* areas but there is a higher proportion of pharmacists over the age of 65 practising in *metropolitan* and *other rural* areas (AIHW 2003, pp. 11–12). This latter age group makes up 11.4% of pharmacists in *rural areas* and 11.3% in *other metropolitan* areas. In *very remote* areas, there is a very small proportion of young pharmacists (aged less than 30). The average age for pharmacists working in *remote areas* is 42.8 years. However, the average age for women in these areas is 34.3 but for men is 50.0 years. *Other rural areas* have the oldest pharmacists, with average ages of 49.6 for males and 49.0 for females (AIHW 2003, p. 10). Thus, both the age range and distribution of pharmacists differ between rural areas and metropolitan areas of Australia.

Only one-third of pharmacists practise in rural areas but rural community pharmacists works longer hours compared to the average in Australia of 38.2 (AIHW 2003, p. 13). The average hours worked by pharmacists in *capital cities* was 37.7, *other metropolitan* was 38.0, *remote* was 42.7, and *other remote* areas was 43.5 hours per week (AIHW 2003, p. 13).

The rural workforce is older, with additional practice pressures. Rural pharmacists, especially males, are more likely to work longer hours. This study investigated whether these factors impacted on participation in local health promotion activities to see if health promotion in rural areas differed from that in metropolitan areas.

2.5 Health Promotion in Pharmacy Curriculum

Within the context of pharmacy practice, pharmacists consider themselves medication experts in the treatment of disease and in health promotion (Blenkinsopp et al. 2000). In 1998 the European Forum of Pharmaceutical Associations and the WHO wrote the *EuroPharm Forum Declaration* (WHO 1998b), encouraging practising pharmacists to share responsibility for the education and training of pharmacy students and promote the inclusion of public health and health promotion in pharmacy education.

The curricula of the School of Pharmacy at the University of Tasmania, the Victorian School of Pharmacy at Monash University and the School of Pharmacy at Latrobe University were examined for health promotion content. These are the schools of pharmacy most likely to educate students and thus future pharmacists within the study area. Postgraduate curricula examined included those provided by the Pharmacy Board of Tasmania in its *Graduate Accreditation Programme*; the Victorian School of Pharmacy; Monash University; and the Australian College of Pharmacy Practice.

Curricula content was studied to examine variations between schools of pharmacy and postgraduate options for pharmacists in the study practice area. The study investigated possible differences in pharmacist participation in health promotion activities.

2.5.1 Undergraduate

In Australia, education of pharmacy students at the undergraduate level is expected to include basic science and technology, including epidemiology, behavioural and social science, and applied science, the latter including pharmacy practice. Health promotion and disease prevention, public health issues, and pharmacoepidemiology are usually included in these pharmacy practice units. The patient is the major focus of the course but students are expected to complement this approach by working with other health professionals and the wider community (PSA 2004).

The *Competency Standards for Pharmacists in Australia 2003* sets the levels expected by the profession of any newly registered pharmacist. These standards expect a Bachelor of Pharmacy degree to contain the applied disciplines of medicinal chemistry, pharmacology, pharmacokinetics, pharmacodynamics, pharmaceutics and pharmacy practice.

Pharmacy Practice comprises:

> 'the integration of the above disciplines with knowledge of disease states and pharmacotherapy, quality use of medicines (QUM), safety and risk management, health economics, public health issues, health promotion and disease prevention, pharmacoepidemiology, health care policy, the place of the pharmacy profession in the health care system, the standards of professional conduct, the ethics of the profession of pharmacy, the law relating to pharmacy, and the management of human, fiscal and time resources.' (PSA 2003b, p. 21).

At the University of Tasmania, health promotion as a concept is only mentioned once in the course guide for the Bachelor of Pharmacy course (University of Tasmania 2004). It only appears in course material in *Pharmacy in Health Care* (Unit CSA105), a unit compromising 25% of the first-year course. Part of the course description reads:

> '...basic principles of disease prevention and health promotion; biomedical ethics; a consideration of the various forms of 'health' and 'ill-health', and of the distribution of morbidity and mortality in contemporary Australia; biomedical statistics; health care economics; pharmacoepidemiology; child development, drug and alcohol studies; library skills and computer literacy; an introduction to bioinformatics and pharmacogenomics, pharmacy practice and pharmaceutical care, and rural health...' (University of Tasmania 2004).

Health promotion as part of a single lecture has been included in the course for 5 years. From 2003, the principles of health promotion and quality use of medicines are now presented as two lectures given in second semester (Howarth 2004). For the past two years a seminar on presenting skills has also been included. There is no further mention of health promotion in the course guide in subsequent years.

At Monash University, in Melbourne, Victoria, the School of Medicine, at Monash has a *Health Promotion Unit* (Monash University 2002c) incorporating theory and practice. However, the School of Pharmacy does not have an equivalent. The Victorian School of Pharmacy has *Pharmacy Practice* (Monash University 2004b) units running in all years of the course. In second year, an introduction to social pharmacy, pharmaceutical care and public health is included. Pharmacoepidemiology is given in third year. Principles of health promotion and

disease prevention comprise part of the fourth year unit in this subject (Units VCP2011, 3011, 4011). These principles are also covered in practical assignments.

At Latrobe University, in Bendigo, Victoria, the School of Pharmacy which is within the catchment area for the survey conducted for this study, has a rural focus within its curricula (Latrobe University 2004). Included in the first year subject, *Introduction to Pharmacy,* students study relationships between health and various theories of learning, motivation and personality. *Public Health Frameworks for Rural Pharmacy Practice* in second year, offered as a Web CT course with tutorials, introduces students to:

> '...the interdisciplinary and intersectoral nature of public health and the belief that health professionals acting individually and collectively can improve public health....social/environmental determinants of disease and health. Key frameworks will be introduced which can guide public health practitioners when planning, implementing and evaluating various strategies.' (Latrobe University 2004).

Pharmacy practice in the rural context is examined to give students an understanding of factors affecting the health status of rural Australians and the impact of health service policy, planning and delivery in these rural and remote areas.

Also offered in third year is *Clinical Pharmacy and Pharmacoepidemiological Research. Pharmaceutical Care–Quality Use of Medicines* is a fourth-year subject in this pharmacy course (Latrobe University 2004). It appears that students here are given more exposure to health promotion than those undertaking the other courses reviewed.

2.5.2 Postgraduate

Postgraduate curricula were examined to determine the health promotion content in four courses available to graduates and pharmacists within the study area. Face-to-face options include the *Graduate Accreditation Programme* provided by the Pharmacy Board of Tasmania (Pharmacy Board of Tasmania 2004) for graduates seeking registration as a pharmacist, the Victorian School of Pharmacy *Evidence Based Practice and Health Promotion* (Monash University 2002b) and the *Master of Public Health* (Monash University 2004a) courses for qualified pharmacists and postgraduate students. The only Distance Learning option found for practising pharmacists was *Health Promotion,* comprising modules 1 and 2 within the certificate course provided by the Australian College of Pharmacy Practice (Australian College of Pharmacy Practice (ACPP) 2003).

The Pharmacy Board of Tasmania runs the *Graduate Accreditation Programme* (GAP) for graduates working towards registration as a pharmacist in Tasmania. Each year, from 2000, in the block workshops, *Communication and Presenting Skills, Quality Use of Medicines and Health Promotion* have been included (Howarth 2004). The current workshop on this topic combines some theory with a practical example of potential projects either within or outside a pharmacy. In 2004, students were expected to conduct this small health promotion project within their workplace.

At the Victorian School of Pharmacy, Monash University, Melbourne, Victoria an *Evidence Based Practice and Health Promotion* Course (Monash University 2002b) has been offered twice in the past three years with only a few pharmacists participating each time (7 in 2002; 3 in 2003).

The two-day course comprises:

> 'A combination of seminars and hands-on workshops will explore issues around finding the evidence and being able to interpret and apply it in everyday practice using examples from the real world. The second day will focus on Health Promotion—what it really is, the expectations of professional associations and importantly how to implement and evaluate it.' (Monash University 2002b, p. 1).

Theory and practical examples of health promotion projects that could be easily utilised either within or outside a community pharmacy setting were studied.

The Australian College of Pharmacy Practice, based in Canberra, offers distance learning modules Health Promotion 1 and 2 as elective modules in the Graduate Certificate of Clinical Pharmacy (Primary Health Care) (ACPP 2003). Each unit is expected to take 25 hours to complete and has the following learning objectives:

Module 1:

1. Knowledge of the basic concepts and models used in health education;
2. The ability to describe and differentiate between knowledge, attitudes and behavioural changes;
3. The ability to set realistic, measurable operational objectives; and
4. The ability to plan a health education programme.

Module 2:

1. Development and use of aims, objectives, planning stages, teaching methods, implementation and evaluation of health education programs;
2. The ability to design a health education program; and

3. The ability to evaluate health education programs.

In 2003, Module 1 references were still drawn from the early 1980s. There is one reference per learning objective. The first three are from the United States, on 'Social Learning Theory and Health Education', 'Strategies for Improving Compliance with Health Promotion Programs in Industry' and 'Behaviour and Behaviourism in Health Education'. The fourth reference was a lecture given to the Cancer Society in Australia on 'Four Models of Health Education', describing the behavioural models of health promotion previously reviewed (see Chapter 2, p. 31). These references do examine theories of health promotion but are outdated. However, despite these references being examples of health promotion theory they all refer to health education. No references were supplied for the second module. The text supplied is *'Evaluating Health Promotion—A Health Worker's Guide'* (Hawe, Degeling & Hall 1990), written in 1990, which does not specifically mention pharmacy practice at all, thus making it difficult for pharmacists to form an impression of the range of opportunities available in health promotion theory and practice in this field.

2.6 Summary

A broad range of theories, which take into account health, social sciences, and existing determinants of health such as the environment underpin health promotion. This eclectic range of theories arose from a variety of sources and all affect health professional practice. Health promotion has evolved over the past four decades from information and education, to development of the *Ottawa Charter*, to recognition of

the necessity of having health promotion in settings in which people live and meet, to the social challenges of the current decade. The impact of capacity building in health promotion activities was also discussed to provide examples of its lack of inclusion by the pharmacy profession.

However, it was shown that definitions of health promotion in pharmacy practice are often limited to day-to-day interactions within pharmacies providing information to educate customers. The scope of health promotion in the *Professional Practice Standards* and *Competency Standards for Pharmacists in Australia 2003* was analysed demonstrating the potential these standards may have to restrict the role of pharmacists' participation in health promotion, by giving mixed messages within the Standards themselves.

The analysis of the pharmacy workforce both in Australia and overseas showed the average age and work habits of members of the pharmacy profession. Also discussed were issues concerning the type and method of pharmacy practice and the external pressures faced by the profession today. The particular issues of rural pharmacy practice such as location, age, gender and hours of work were examined for differences from their metropolitan counterparts. An impending change in pharmacy practice worldwide was highlighted by the review of the trends seen in the current pharmacy profession.

Currently, Victorian universities appear to include more health promotion content in the undergraduate curricula than does the University of Tasmania. At the postgraduate level options for studying health promotion are few. The Pharmacy Board of Tasmania includes health promotion within its graduate trainee workshops.

Small numbers of pharmacists attended the Victorian College of Pharmacy course and the distance learning option provided by the Australian College of Pharmacy Practice elective Health Promotion Modules 1 and 2 is clearly in need of updating. Thus, it appears that health promotion theory is not given a great weighting by the educational institutions, therefore restricting the profession's knowledge and consequent use of its principles.

According to Peter Kielgast, immediate past president of the International Pharmacy Federation, developed countries spend nine times as much on doctors and medical interventions as on disease prevention and medicines (Smith 2004). With such a focus the health system does not appear to consider the value of health promotion strategies and the lack of details and focus within the pharmacy literature seen thus far supports this interpretation. Examples of health promotion in pharmacy practice literature will be examined in the next chapter.

Chapter 3: Health Promotion Practice in the Pharmacy Literature

3.1 Overview

The nature of health promotion in the pharmacy literature and the future of pharmacy practice will be examined in this chapter. Community pharmacy and hospital pharmacy practice have evolved, but both internal and external pressures, as described in the previous chapter, continue to impact on traditional current pharmacy ways of working. An investigation of the literature for examples and methods, in which pharmacists have changed practice and included a health promotion focus in their work, will form the basis of this review.

This review of the pharmacy literature indicates strongly that very little research has been undertaken into pharmacists' involvement in health promotion outside the pharmacy. Many of the articles evaluated were reports and comments in non-peer-reviewed journals and trade publications. Examples often present a narrow view of health promotion within the pharmacy profession, consisting of an array of individual patient education processes and information pamphlets (leaflets) or posters, displayed in the pharmacy. If participation in activities outside the pharmacy is mentioned at all, there is very little real detail to give the reader a sense of the nature of this participation.

While the Australian pharmacy literature has been extensively examined, articles from Canada, the United Kingdom and the United States were also searched and reviewed to provide an insight into participation in health promotion by pharmacists

in those countries. This review will show that the numbers of pharmacists who do participate in health promotion projects or programmes are either in relatively small groups or do so as individuals. Compared to the actual numbers of registered pharmacists and pharmacies in these countries studied, the overall number participating in health promotion activities is small.

The chapter concludes with a review of planning documents and articles looking at proposals and suggestions for the future of pharmacy practice as seen in Australia, the United States and the United Kingdom. It is strongly suggested by these papers that pharmacy practice as we know it must change for the effective continuation of the profession.

3.2 The Pharmacy Literature

The pharmacy literature consists of many peer-reviewed journals but also of professional journals containing some peer-reviewed articles and trade journals reporting opinion, events and examples of practice within the profession. Research for this review was conducted by using the broad search terms pharmacy or pharmacist and health promotion. However it was found that some references which this author considers to be about health promotion do not mention these specific words at all. In addition, many other references were obtained through personal communication using knowledge gained of examples of health promotion practice after working in this field.

Many of the references examined were not available through medical or pharmacy databases such as *Medline* and were found manually in, for example, the *International Pharmaceutical Abstracts*. Non-peer-reviewed journals such as the Royal Pharmaceutical Society of Great Britain publication, the *Pharmaceutical Journal* and the Pharmaceutical Society of Australia publication, *Australian Pharmacist* do contain some peer-reviewed articles however many items are opinion and reporting of local projects, often by individuals. The Australian publications, *Pharmacy News, The Australian Journal of Pharmacy* and the *i2P Pharmacy Magazine* and the British publication *Chemist and Druggist* are all independently published but although it could be argued that they contain useful information, they are all trade publications. They are however, often cited as examples of pharmacy practice and are included in this review.

Australia

In chronological order the literature review provides examples of health promotion in pharmacy practice showing changing concepts, terminology and patterns of Australian pharmacy practice seen over time. Despite the urgency expressed by the authors the profession is still considering the concepts put forward in many of the articles that promote a change in pharmacy practice. Although health promotion is commonly referred to in these publications, the scope of practice provided by health promotion theory is not.

In Australia, before the 1950s, pharmacists moved from primary health (diagnosing, advising and treating health problems) to prescription-related activities (Berbatis 1986). A survey conducted by Ortiz (1990) in 1983 to determine a pharmacist's role found that to 'promote healthy lifestyle' was ranked 9 out of a possible 18 work

tasks. Rated last was 'helping to manage stable chronic disease'. Pharmacists considered their primary role to be dispensing prescriptions; their second, to answer over-the-counter (OTC) medication questions; and their third, to answer prescription medication questions. Ortiz claimed that the function of a pharmacist is limited by his or her abilities and role perceptions.

In 1985 it was reported that as many people visited a pharmacy as visited a doctor in any one year (Berbatis 1986). Nearly 20 years later, community pharmacies in Australia annually have 78.2 million consultations regarding health and medications (Berbatis et al. 2003), showing multiple visits to and accessibility of the profession by most members of Australia's population.

Also in 1985, Coper and Gilbert (1985) proposed that the role of the pharmacist in primary health care activities was one often ignored by health service planners. Also, pharmacists were not aware of primary health care networks and did not seek involvement. Pharmacy was not funded to have any involvement. However pharmacists were welcomed if they made approaches to these organisations and groups. Coper and Gilbert suggested that: 'This may involve pharmacy changing its traditional focus to doing things with people, rather than to people' (p. 484). What pharmacists need is a: '...rethinking of what primary health care is, and how pharmacists can contribute' (p. 484). But: 'In practice this requires a number of initiatives from within pharmacy. At all levels of education, an increased emphasis is required in the areas of multi-disciplinary education, aspects of health promotion, epidemiology, health education, screening, early detection...' (p. 485).

The report on the *Value of Professional Pharmacy Services* (Emerson, Whitehead & Benrimoj 1998) delineates a community pharmacist's role in cognitive services using the Benrimoj model of 1998:

1. Provision of Drug Information;
2. Provision of Pharmacy and Pharmacist Only Medications;
3. Clinical Interventions;
4. Medication Management Services (Drug Regimen Review);
5. Preventive Care Services for Patients with Chronic Conditions; and
6. Participating in Therapeutic Decisions. (Emerson et al. 1998, p. 10).

The words 'health promotion' only appear within the detail of the fifth point in the guise of preventative care services, and then only in an information-supply function. Most of the other services listed can be interpreted as health promotion activities but are not recognised as such in this model.

Consumers may have a low level of awareness of pharmacists' breadth of skills and drug knowledge and lack of familiarity with pharmacists' roles as drugs- and health-related information providers. Pharmacists are seen as the drug expert (Aslani , Benrimoj & Emerson 1999, Blenkinsopp et al. 2000), but a role outside the pharmacy is not the norm. The studies listed below show some pharmacist participation outside the pharmacy by way of community talks, but overall there are few examples in the literature usually with a small number or low proportion of pharmacists contributing to these studies.

'The Role of the Community Pharmacist in Health Promotion—A Survey of Health Education Presentations Outside the Pharmacy' (Gowan 1992), provided reference

information to assist pharmacists to give presentations, in Victoria. This state of approximately 4 000 000 people, had about 4000 pharmacists in 1992 (AIHW 2003), an assumption made by this author based on the 2003 report by the Australian Institute of Health and Welfare which stated that in 1999 there were 4518 registered pharmacists. Only 106 pharmacists in 2 years requested this information (2.65% of registered pharmacists using the figures from based on the assumption above). Half of the pharmacists returned the evaluation from the survey with details of 42 presentations, all of which were initiated by requests. There was no demographic data relating to the pharmacist. Gowan writes that there was limited literature on this topic but gave no references to other publications. Motivating factors to give presentations included increased goodwill and publicity, professional satisfaction, rewarding experiences, improved relationships and professional standing in the community, and provided an increased awareness of the pharmacists' role in health education. Barriers to this practice were lack of remuneration but the respondents suggested that the public would pay for this service. Half the respondents replied that they would like to improve their presentation skills. This article was published in 1992, when several resource information kits were available: in 2004 of those resources cited, only one, Medi-Whyz now known as MediWise (Department of Veterans' Affairs (DVA) 2002), has been updated. As a result of this study, Gowan stated that pharmacists have a key role in health promotion both within the pharmacy and outside it in the community. She also stated that pharmacists need to be involved in local health care programmes and offer health education, despite the relatively low number reported as currently offering this service, as indicated by this paper.

In 1993, Mahoney, established that participation in health promotion in rural areas by pharmacists usually consisted of professionally generated health promotion programmes such as Pharmacy Self Care (PSA 1997) and Discover Better Health (Mahoney 1993). Pharmacists were frequently involved in health screening programmes such as Infotest and blood pressure monitoring with several partners such as local hospitals, the Diabetes Association and the local asthma support groups (Mahoney 1993). All of these programmes described were within the pharmacy itself, and the study did not provide an actual measure of the participation by pharmacists in any outside programmes.

In the 1995 Commonwealth study on *Information Needs for Health Promotion in Primary Health Care* (Commonwealth Department of Human Services and Health 1995), the PSA replied on behalf of the pharmacy profession, amongst responses from many other health groups. Seventy-nine percent of the individual pharmacist respondents in this study were male and fewer than 35% of these saw themselves as involved in health promotion; that was the lowest participation rate of all health respondents. However, the PSA stated that pharmacists engaged in 'giving talks to community groups on a broad range of topics' as an activity. Three-quarters of the respondents had never heard of the resources HealthWiz, HEAPS or a Social Health Atlas. Online or computer bulletin boards were unknown to 50% of respondents. Information sources most used by respondents originated from professional organisations and commercial organisations (over 70%). Pharmacists were asked to nominate whether they participated in the various action areas of the *Ottawa Charter*: the return rate was low. Respondents recommended an upgrade of 'HEAPS, HealthWiz etc' and courses on information management be implemented at an undergraduate level. No such recommendation was made for educational

resources for practising pharmacists (Commonwealth Department of Human Services and Health 1995) or for inclusion of health promotion theory in future professional development.

In an unpublished survey of Victoria pharmacists on *Community Pharmacist Public Health/Health Promotion* (Scavone 1997), a wide range of health promotion programmes was recorded by pharmacies. Examples included Pharmacy Self Care (PSA 1997), immunisation, drugs and driving, folate, cardiovascular-related promotion of physical activity, diet and healthy eating, and accident prevention including child poisoning. The respondents provided no specific detail. Three pharmacies organised walking groups and one visited schools. Only one pharmacy mentioned offering local radio station talks and infant welfare centre talks. When asked, 'Tick which health promotion programs are your pharmacy is involved in?', many listed information kiosks, which are computerised information provision stations, and situated in the pharmacy. Of 1060 surveys sent, it was assumed by using the reply marked for pharmacy marketing group identification that 213 were sent back, thus giving an approximate overall response rate of 20%. Using examples of some of the health services suggested by the survey, the replies indicated that pharmacies supplied services to the following groups: nursing homes (178), lectures (97), Community Mental Health Centres (13) and community education (90). One pharmacy listed occasional talks to the local arthritis group and diabetes group. This study did not ascertain when these services were provided, how often, or if conducted within or outside the pharmacy itself, however it can be seen that a high proportion of respondents from the relatively low overall return rate offered these services. This survey was sent to community pharmacies in metropolitan, urban and rural areas of Victoria. Consequently the responses reflected the participation by the

pharmacy business, not the individual practitioners, and there was no distinction indicated between geographic locations of the respondent pharmacies. Many responses agreed that pharmacy should be involved with government health programmes and that because pharmacy does not contribute it is often bypassed; however, the respondents indicated pharmacies must be recompensed for this contribution. This survey showed that community services offered by the local pharmacies indicated a degree of participation in local activities, but it does not give a clear picture of the actual involvement by individual practitioners over time. Overall, the respondents acknowledged that the profession needed to be pro-active in public health and health promotion, however, the survey showed limited contribution outside the pharmacy setting without specific detail given of actual events.

The Curtin University survey, entitled *The National Pharmacy Database Project* conducted by Berbatis et al. (2003), surveyed 15% of Australia's community pharmacies in 2002, a number deemed sufficient to give a statistically viable sample for analysis. Of 4447 possible pharmacies, 1131 in all areas of Australia were represented in this project. As 81% of pharmacies, using the pharmacy metropolitan/rural classification system, PhARIA, (Appendix 5.1, p. A-63), are in PhARIA 1 areas, a portion of this group was used together with larger proportions in the PhARIA sections of 2 to 6 to enable the project team to draw conclusions from the results. The usual respondent was the owner or partner (73.3%), and the answers relate to the activities of the community pharmacy. Sections on 'Enhanced Pharmacy Services' and 'Primary Health Care' were examined in more detail to provide background supporting this study.

Only certain areas of the survey itself that related to this current study were examined to ascertain those areas with a health promotion focus. Many of the services that could be interpreted as health promotion were listed in 'Section B: Enhanced Pharmacy Services, Paid or Unpaid' (Berbatis et al. 2003, p. 33). Services in this section were health services such as those related to asthma, diabetes, methadone maintenance, herbal medicines, hypertension, smoking cessation, skin and wound care and weight reduction, but only the replies to 'community education', that were considered relevant to this study, were analysed. 'Structured community education' was only offered by 26.7% of pharmacies, with 58.3% not offering this service at all and the question not answered by a further 15.2%. Thus, 73.3% of pharmacies do not offer this service at all. Of those that do, 7.5% offered this service with trained staff, 21.6% with no charge, 1.3% for payment and 3.8% suggested that they would introduce this service in the next 12 months (Berbatis et al. 2003, p. 35). For all activities listed, the answers indicated the services that the pharmacy made available, but there was no detail as to the number of times that this service was actually offered or that the community accepted this offer. It was not clear if indeed a pharmacist conducted these educational talks. Larger pharmacies in areas with a lower PhARIA number of 1, 2 or 3 (Appendix 5.1, p. A-63) are more likely to offer 'Enhanced Pharmacy Services' however herbal health and aboriginal health services were more likely to be offered in those more rural pharmacies with higher PhARIA numbers of 4, 5 or 6. Usually, health promotion activities are offered inside the pharmacy, but this survey indicated that about a quarter of pharmacies do offer services, such as community education, outside the pharmacy itself, however the actual degree of uptake is not clear from this study.

The services listed above are expected in Australian pharmacies but overall, for all services, Berbatis et al. suggested that the differences in the range of services offered might relate to interstate differences in training (Berbatis et al. 2003, p. 10), and identified several barriers and facilitators to such services. Barriers included lack of time (90.3%), shortage of pharmacists (78.3%), no extra remuneration (63.3%) and inability to find locums (63.2%). The greatest facilitators were dedicated study time (77.9%), accreditation (75.6%), closed counselling areas (72.8%) and access to patient notes (70.6%) (Berbatis et al. 2003, p. 5). It can be seen that many of the barriers and facilitators may relate specifically to the other services offered in this section of the survey, but many are applicable to this research on potential practice change.

Section F, 'Primary health care services including pharmacy (S2) and pharmacist-only (S3) medicines' (Berbatis et al. 2003, p. 51) in this same survey, defined primary health care services in the pharmacy, as sales and advice for pharmacy only (S2) or pharmacist only (S3) medications, information, misuse of these medicines, consumer medication information, referrals to general practitioners or other health professionals. This definition of primary care services leads the pharmacy profession and consequently restricts it in the range of activities that can usually be thought of as primary health care.

Another example of pharmacist involvement in health promotion (Bradley 2004), was a recent education session reported on Auspharmlist (Haworth 2004), a pharmacist electronic discussion board and also by the *Sydney Morning Herald* (Bradley 2004). The diabetes information evening unfortunately evolved into a presentation by a drug company promoting its own brand of insulin. Ethical

implications for the profession as well as a balanced approach to a health promotion activity should have been considered in this seminar, and discussion on Auspharmlist ensued.

When searching for articles on pharmacists and health promotion the pharmacy is usually listed as the site for the activity, and the term 'health promotion' is often used throughout the reference without qualification. Examples of this practice will be presented in the following projects conducted by pharmacy researchers.

Hournihan, Krass and Chen (2003) conducted a project in a rural pharmacy aimed at identifying and conducting education on cardiac issues with selected participants. As part of the staff education for this project, information on health promotion and behaviour change education was included. There was no acknowledgement that one was part of the other and this was the only mention of health promotion in the entire article. Thus, health promotion is seen as an additional activity within pharmacy practice but it could be argued that the whole project was one of health promotion.

Health promotion by rural community pharmacists was deemed both feasible and possible in the asthma education project conducted by Kritikos, Saini, Bosnic-Antocevich, Krass, Dalton, Hulme and Armour (2003). Pharmacists were trained to give both educational talks to school and college students and a public information lecture. The evaluation showed that pharmacists' input was appreciated with an increase in information requests about asthma and asthma devices in the pharmacy. Although conducted with Asthma Australia, this project appeared to be conducted in isolation from other asthma activities such as holding the project in Asthma Week which could have added to its impact within the community. Building on

community participation in this way could have provided a more extensive health promotion approach, thus allowing ownership of the project not just by the pharmacy but also by the community as a whole.

A role for pharmacy was studied by Nisbet-Smith and Emmerton (2004) in active lifestyles programmes. Time and commercial viability were barriers to pharmacists' participation but half the clients in the study expressed concern about the pharmacist's ability to provide exercise advice and they thought this was the role of the general practitioner. The authors acknowledged that the numbers were small and the sample may have been biased, but with proper training they concluded that there is a role for pharmacists in this activity. The words 'health promotion' were not used at all in this article and this may contribute to the profession's lack of awareness of the definitions and scope of health promotion practice.

Overseas Literature

Examples of health promotion activity from Canada, Great Britain and the United States will be examined in this segment of the literature review. By continuing to use the key term, 'health promotion', articles on pharmacist activities were sought to give an indication of the depth of participation by the profession in events of this nature. As can be seen from the examples in the Australian literature, instances of participation outside the pharmacy setting and the level of participation were sparse. Unfortunately, this reported lack of participation in health promotion activities was supported by examples found indicating a similar worldwide propensity by the profession.

From Canada, the study 'Community Pharmacists Participation in Health Education and Disease Prevention Activities' by Paluck, Stratton and Eni (1994) was found which was used as a template for this study. The survey quoted activity by pharmacists in the past year. In this time, 63.1% of pharmacists had never spoken to a community group, 31.7% had spoken once during the year, 4.6% had spoken once a month, 0.4% had spoken once a week, and 0.2% had spoken once or more daily. However, most pharmacy activities are directly related to the dispensing or selling of medications. Participation in community health events had never occurred in 12.9% of pharmacies. For 22.7% of pharmacies this occurred once a year; in 32.9% once a month, in 20.8% once a week, and in 10.4% once or more daily (Paluck et al. 1994). No detail was provided as to the nature of this particular type of involvement or any detail of the community group talks.

In a recent newspaper insert, the Canadian Pharmacists Association reports a variety of services (Canadian Pharmacists Association 2004). In a country of 27 000 pharmacists there is no fee structure for additional services of medication reviews, assessments, monitoring or home care. It was suggested that pharmacists do have a role in 'health protection', but do not effectively 'connect' with the public health system. No mention is made of any activities such as those investigated by Paluck.

In Great Britain there are many references to the Barnett High Street Scheme, launched in 1991 in England, as one of the first projects to introduce health promotion into community pharmacy practice (Blenkinsopp et al. 2000, Bond 2000). This scheme, essentially a brochure distribution scheme, used information leaflets, which were two-sided pamphlets about health issues of concern and healthy lifestyle advice. Pharmacists involved in this project, were trained in health promotion

knowledge and skills. However, this distribution scheme was later defined as 'passive health promotion' (Blenkinsopp et al. 2000). Pharmacists were then encouraged to be 'pro-active' in the use of the leaflets by giving them to customers when asked for advice, or to be proactive in opportunistic situations when advice could be given, thus providing an active health promotion service.

Other studies inside pharmacies focused on the pharmacist giving advice and recognising when a person would respond to this advice using the Stages of Change model as a basis. Examples of these include health promotion programmes such as smoking cessation (Anderson 1995) and cholesterol testing (Anderson 1996). By 1996 it was acknowledged that pharmacists should move on from being the experts, telling individuals to change, and undertake a role as facilitators, thus allowing negotiation, and recognising the right of the individual to decide and choose.

In 1997 the *Pharmaceutical Journal* (1997) reported that although leaflets attracted a professional allowance, research conducted by the Avon Health Authority confirmed that pharmacists see health promotion as part of their role but they are constrained by time, resources and training. Despite funding for this service, it appears that there was no requirement for leaflets to be used or handed-out. A self-audit (Pharmaceutical Society of Great Britain 1998) was developed for leaflets as an education and promotion tool for pharmacists to use within their pharmacies.

The Royal Pharmaceutical Society of Great Britain, developed guidelines for health promotion practice by community pharmacists in 1998 (Blenkinsopp et al. 2000), but despite this, pharmacy consumers did not see a role for pharmacists in health promotion or indeed the reason for this involvement. Most thought it was the role of

the doctor to give advice on health. Only 17% of consumers responded that the leaflets were useful (Anderson 1998). Still later, in 2002 when consumers were interviewed again, they still did not perceive the role of community pharmacy as being one involved in health promotion (Anderson, Blenkinsopp & Armstrong 2003).

In 2003, pharmacist advice was still more likely to be reactive, than pro-active (Anderson et al. 2003). Although health promotion had been taught in schools for over a decade its principles and actions were not transferred to practice (Blenkinsopp et al. 2000).

In Great Britain, the structure of the National Health Service works against pharmacists' involvement in health promotion because doctors are a free first option for many patients, consequently the pharmacist must make use of other opportunities. If the patient is in a certain health category—for example, elderly, with a chronic disease, pregnant, or a young child—prescriptions are free of charge. The same item that a pharmacist sells can be obtained without charge by prescription from the doctor. Consequently, many consumers do not go to the pharmacist in the first instance, as happens in Australia. However this system can work for pharmacists, as there are many options for employment by Health Care Trusts in positions such as primary care pharmacists, practice pharmacists or community services pharmacists (Mullen 2003; Pharmaceutical Journal 1989). These Health Care Trusts can also support pharmacy practice with grants for pilot programmes to individual pharmacists (Adcock 2004a, 2004b; Lumb 2004; Mullen 2003), yet it appears few pharmacists take advantage of this opportunity. In 1998, Blenkinsopp, Panton and

Anderson argued: 'Health promotion needs to become a 'way of thinking and working' rather than an 'add-on' activity.' (Blenkinsopp et al. 2000, p. 95).

Yve Buckland (Pharmaceutical Journal 2001a) in 2001, maintained that programmes, such as the leaflet distribution Barnett High St Scheme, were still influencing practice 10 years later and is quoted in the British literature as saying:
'In the past pharmacists' role in health promotion have been geared simply towards health education' (p. 794). She stated that pharmacy should offer services such as screening, testing facilities and advice. The Pharmaceutical Healthcare Scheme was developed to promote and support the development of models of best practice and to lobby government for a wider role for pharmacists. Research and developing key relationships with other professional bodies and training organisations were two of the areas necessary to develop to represent the needs of independent and multiple pharmacies. To maintain currency of health promotion advice, the supply of education leaflets was taken over by Health Promotion England (Bellingham & Buckland 2001). Statutory bodies thus ensured that the profession had up-to-date information and provided links that could enhance the role of the profession to one supported in health promotion activities.

Maguire, (2001), at the European Conference on Health Promotion in General Practice, 2001, believed that there is a clash of cultures and a basic misunderstanding of the difference between health promotion and pharmaceutical care. The pharmacists who presented at this conference delivered papers on pharmaceutical care, not health promotion and thus did not understand the difference in definition. His example was the presentation of a study on asthma, which did not take into account the smoking habits of its participants. Maguire proposed refining the

definition of health promotion for pharmacy to one of 'primary care health promotion' (Chapter 2, p. 43) thus including both drug-related and lifestyle advice into pharmacy practice and therefore ensuring provision of a holistic service to improve health.

In Great Britain, not all pharmacists were willing to become active in health promotion projects. In Birmingham, (Jesson 2002) in 2000, although 95% of residents used the only pharmacy in the area, the pharmacist was busy dispensing and would not participate in a community health promotion project on smoking cessation with the Birmingham Housing Action Trust (HAT). Despite a financially supported pharmacy intervention project being offered, the pharmacy still would not participate. This example of a refusal to participate demonstrates a lost opportunity for the profession to work with the community to improve the health of the local area.

In Scotland there has been a change towards health promotion for pharmacies. The development of the programme, 'Health Promotion for Community Pharmacists' in Greater Glasgow (1995–90) (Grant & Bryson 2001) programme had the aims to support; to provide introductory training, specialist training on priority health promotion topics, support for participation, and a resource manual; and to evaluate the development of health promotion in pharmacy. It was proposed that health promotion would become an integral part of pharmacy practice within the pharmacy (Coggans, McKellar, Bryson, Parr & Grant 2001; Ritchie, Parry, Gnich & Platt 2004; Strath 2000; Strath, Ranshaw & Pruce 2001; Watson & McCloughan 2004). An increasing research role for pharmacists within pharmacies was developed because the 1140 community pharmacies were seen as already acting as walk-in healthy

living centres with potential to provide a wider range of health promotion advice (Coggans et al. 2001; Grant & Bryson 2001; Watson & McCloughan 2004). As there are 37 912 practising pharmacists and 12 492 registered pharmacies in Great Britain (Anderson 2004; Smith 2004), the impact of the Scotland project with such a high number of participating pharmacies was significant compared to that of the rest of Great Britain.

Recent literature from the Royal Society of Great Britain's *Pharmaceutical Journal* cites local initiatives by individual pharmacists within their pharmacies in the areas of weight management and healthy lifestyle, smoking cessation and primary care (Adcock 2004a, 2004b; Pike 2004a, 2004b) together with support from the Primary Care Trust smoking cessation clinics (Lumb 2004) or men's health (Andalo 2004). These initiatives provided obvious professional satisfaction for the practitioner involved and a valuable community service.

Anderson and Blenkinsopp (Anderson & Blenkinsopp 2003), who reviewed local initiatives in public health, now use the term 'public health' for when health is promoted through society, and the term 'health promotion' when the promotion is directed to the individual. There were 184 projects identified in the areas of smoking cessation (63), drug misuse (44), sexual health (31) accident prevention (7), health screening, obesity and weight reduction, heart disease and diabetes (4 each) and others (Anderson & Blenkinsopp 2003). Activities reported were service provision or information. Anderson and Blenkinsopp suggested that this was a high level of involvement, however, in a country with nearly 13 000 pharmacies, with 184 projects representing a participation rate of as low as 1.4%, could surely only be called a start. The description for the role of the pharmacist is given as 'public health', but in many

of the examples listed that have been developed and implemented in Great Britain over the past 15 years, this same role was previously designated one of 'health promotion' (Anderson 1995, 1996: Bellingham 2004; Blenkinsopp et al. 2000; Jones, Armstrong, King & Pruce 2004; Maguire 2002; Pharmaceutical Journal 2002b). This current study investigates the role of pharmacist participation in activities outside the pharmacy itself. Despite the number of references to health promotion in Great Britain found, there were no specific references discovered on pharmacist activities outside the pharmacy itself. All references relate to activities, particularly information provision or clinics within the community pharmacy setting, thus providing a service in isolation to other community health promotion activities.

In the United States, when searching for pharmacy practice guidelines as an indicator for health promotion participation expected by the profession, five American Pharmacy Associations were found that did not have any positional papers or guidelines on this form of pharmacy practice (Medscape 2004). Health promotion could not therefore be considered as an important part of pharmacy practice within the United States. Suh, Greenberg, Schneider and Colaizzi (2002) found that pharmacists considered health objectives related to preventative services more important than objectives related to health promotion and protection. But preventative services are related to the definitions and theories of health promotion practice described previously in Chapter 2, p. 26. Improving nutrition or reducing tobacco use was classed as health promotion, but examples of preventative services included prevention and control of diabetes or hypertension. However, part of the information and counselling in these preventative services is often improving nutrition and reducing tobacco use. Confusion in definition continues to limit the

profession providing a service to compliment existing common practice; and this is exacerbated by the lack of professional guidelines on health promotion practice.

Kotecki, Elanjian and Torabi (2000) in 2000 surveyed 'Health Promotion Beliefs and Practices among Pharmacists in Indiana' to determine whether pharmacists see health promotion as part of their responsibility. Pharmacists believed they had a responsibility to promote healthy behaviours when counselling patients, but barriers to health promotion practice were cited. These included the constraints of introducing another practice while working (93%), lack of reimbursement (62%), physical design of the pharmacy (47%), lack of information or training (46%) or insufficient management support (29%). Half of the respondents said that they provided health education programmes to the general community but there is no detail in the questionnaire as to what this participation may have entailed. The researchers felt that these might include programmes in which they did not directly counsel patients. The conclusions states: 'Yet, while most pharmacists perceived that many health promotion behaviours are "very important" for the average adult, most did not feel they should be "very involved" in counseling patients on health-promoting behaviors' (p. 779).

Kotecki et al. (2000) stated that personal beliefs concerning both the validity of health promotion and the pharmacists' ability to influence patient behaviour might affect how much effort a pharmacist expends using health promotion approaches. Pharmacists were well-positioned to make important contributions towards health promotion and disease prevention; however, this study recognised the activities within a pharmacy, but gave little detail to the programmes provided to the general community. The work of O'Loughlin, Masson, Dery and Fagnan (2000) who

surveyed pharmacists' roles in cardiac disease health prevention education, supports this conclusion.

Health promotion was reinforced as the third domain of pharmacy in the Pharmacy Practice Classification Project (PPAC) (Kotecki et al. 2000) conducted by the American Pharmacy Association. The four domains are:

1. Ensuring appropriate therapy outcomes;
2. Dispensing medications and devices;
3. Health promotion and disease prevention; and
4. Health systems management.

Therefore, it appears that health promotion and disease prevention are recognised as roles for the pharmacy profession in the United States.

Ciardulli and Goode (2003) used 'Health Observances to Promote Wellness in Community Pharmacies' to suggest that pharmacists develop pharmacy-based health promotion activities such as education and screening programmes. However, as this service takes place within a pharmacy, it again provides an example of the role of the pharmacist as one isolated from other health professionals who often have a more involved role in health promotion activities in the community itself.

A number of examples of the pharmacists' role in health promotion have been given in this section. Beney, Bero and Bond (2002) in a Cochrane Database Systematic Review of pharmacists' role expansion to working with other health professionals and the public found 25 studies, but doubted the generalisability of these studies as they had poorly defined interventions, cost assessments and patient outcome data and suggested that more rigorous research is needed. Due to the nature of the community

pharmacy practice, pharmacists do not appear to work with other professions other than with issues involved with individual patient care. Pharmacies, especially rural pharmacies, often provide the site for other health professional consultations but each profession works separately in this context (Emerson 1997; Emerson et al. 1998; Mahoney 1997).

Very few examples of participation in health promotion activities outside the pharmacy setting have been found in this literature review, however many innovative activities have taken place within the pharmacy setting. Many results from surveys with small return rates suggested service provision in relatively small isolated activities. Most did not give actual participation rates over a defined time. Examples provided show pharmacy practice is frequently one of an isolated health professional and one is unused to going outside of the pharmacy context into the community to participate in community activities.

3.3 The Future of Pharmacy Practice

A succession of planning documents and articles from the past 20 years looking at the future of pharmacy practice was examined to provide an overview of the future of the profession, both in the area of health promotion practice, and options for the extension of current professional practice. Documents from Australia, the United States and the United Kingdom formed the basis for this analysis. A more patient-centred and holistic approach to reflect current teaching in pharmacy schools together with an increased role in health promotion and public health is suggested, to take advantage of the practice opportunities of the future.

Nearly twenty years ago, in 1985, the major factors envisaged to affect pharmacy in the United States in 2010 were an increasingly elderly population, more widespread wellness and health promotion activities, a decline in health-care expenditures as a proportion of Gross National Profit, and an increase in use of home or natural remedies. It was also predicted most that pharmacists would practise as part of mega-health-care enterprises or chain pharmacies (American Journal of Hospital Pharmacy 1985).

In Great Britain, 73% of pharmacists work in community pharmacy, compared to 80% in Australia, and pharmacists should have a role in health promotion and public health according to the Chief Pharmaceutical Officer (Department of Health U.K. 2003), who developed for the future, the '10 Key Roles for Pharmacy' in 2003. He stated that people were looking to their local pharmacist for advice and help on topics such as smoking cessation, emergency hormonal contraception and dealing with substance misuse. Although the first role for the future pharmacist in the Chief Pharmaceutical Officer's proposal is provision of convenient access to prescription and other medicines, it is not until in the second-last role listed for the profession, that health promotion and public health is mentioned: 'To be a public health resource and provide health promotion, health improvement and harm reduction services' (Department of Health U.K. 2003, p. 9).

An appreciation of public health rather than individual behaviours and the narrow biomedical model taught in pharmacy schools is the future of pharmacy practice according to Bissell, Ward and Noyce (2000) while Clive Jackson, of the National Prescribing Centre in Great Britain proposed 'seven pillars for change' for pharmacists (Swan 2003): medicine management services, pharmacist prescribing,

workforce and skill mixing, mandatory continuing professional development and revalidation, 'pharmaceutical public health and pharmacosocial care', patient and public involvement and ownership, and pharmacogenetics. Pharmacosocial care used a model of pharmaceutical care together with social care issues, and acts in accordance with the previous models of health promotion of the current decade suggested by Catford, (2004) and noted previously in this thesis (Chapter 2, p. 26).

In the 21st Century in Great Britain, the new approach will see the patient as the expert in chronic disease who will form patient–professional partnerships (Department of Health U.K. 2001). This report does not mention pharmacy except as a place to receive information and advice. Patients with chronic disease will successfully use health-promoting strategies (for example, improving diet, exercise, weight control). Pharmacy, as a profession, is not seen as a key player in this approach, and must consequently lobby for inclusion, as suggested by Anderson (1996, 2000) and others (Smith 2004).

Ghalamkari and Jenkins (2002) challenge pharmacists to act as social entrepreneurs. As a profession: 'Pharmacists are ideally placed to champion improvements in a neighbourhood as long as they take a holistic view of wellbeing. Most pharmacists are aware of local health and social issues that directly affect their communities.' (p. 358). Pharmacists may deliver health care within pharmacies but pharmacists have the ability to be proactive within their communities, especially in areas of health promotion. Pharmacists are described as the missing links in many marketing strategies promoting healthy lifestyles (Ghalamkari & Jenkins 2002) and must be proactive in approach to health.

One of the health challenges and strategies in the 21st century include the marketing of primary care options over tertiary care. Pharmacists are ideally situated to take advantage of this. The World Bank's 1993 World Development Report, entitled 'Investing in Health', produced in collaboration with WHO, urged a reduction in investment in expensive tertiary care and a greater focus on promoting health among the disadvantaged (Hancock & Garrett 1995). Kielgast, a former president of the International Pharmacy Federation (Smith 2004), supported this by saying that developed countries spend nine times as much on tertiary care as preventative health measures, and challenged pharmacists to become patient- or consumer-focused and give value for money; and not be a mere supplier of medicines.

Pharmacy can make a bigger contribution to public health. Community pharmacy can make a bigger contribution to building sustainable communities and improving public health and well-being, thus building national and local capacities (Jesson 2002). In Britain, dispensing pharmacists are an expensive commodity and must therefore adapt to survive and move to the front line of patient care (Pharmaceutical Journal 2002a, 2002c). The activities associated with health promotion can provide the basis for this change.

In Australia, Peterson (2002) argued for the future of the profession. It must add value to provision of pharmaceuticals. The pharmacist has to demonstrate a cost-effective contribution to health care and transform the profession from one of supply to a patient-centred approach, as is being taught in our pharmacy schools. The community pharmacy profession must maintain its pharmacists, with high ethic cognition, and not lose them to other areas of pharmacy practice such as hospital pharmacy. Although 80% of pharmacists practise in community pharmacy (AIHW

2003), Peterson (2002) believes maintenance of the community pharmacy branch of the profession is a valid career option for students, but that the current model of pharmacy is 'neither sustainable, competitive, focused nor professionally satisfying'.

Pharmacy has an opportunity to be included in the areas of health promotion and public health and implement a patient-focused approach. These articles suggest that the profession's future lies with a proactive approach, in local communities, enabling local practitioners to provide wellness and health promotion activities, thus allowing the profession to utilise holistic social health promotion as a basic approach to practice.

3.4 Summary

The interpretation of health promotion practice and terminology in the literature reviewed, showed differences in approaches, dependent on the countries reviewed. Australian pharmacists consider information supply and health education as part of normal pharmacy practice, without recognising this as health promotion. Our British colleagues consider health promotion to be an added service. In the United States the same examples are called preventative care. The terminology 'health promotion', 'health education', 'primary health care', 'preventative care' and 'pharmaceutical care' in the pharmacy literature is also confusing or ambiguous.

Most references reviewed discussed health promotion activities within the pharmacy itself. Few references within Australian and the overseas literature were found for participation in activities outside the pharmacy. The Australian examples reviewed

are either older, unpublished or as references lacking details of the specific activity undertaken (Berbatis et al. 2003; Commonwealth Department of Human Services and Health 1995; Gowan 1992; Scavone 1997). Some references recorded pharmacist participation in community talks, but details of the content, frequency, and if indeed this service was used at all, were not found. Specific examples of participation in health promotion activities in particular geographic areas to enable comparison between rural and metropolitan practice could not be found. There was no literature found investigating newsletter contributions or media participation. Thus, few examples in the field of health promotion outside the pharmacy setting were discovered to allow a clear understanding of the nature of pharmacists' participation in health promotion activities.

Different models and challenges for the profession in the future, particularly in the fields of health promotion and public health, were shown to provide a value-added pharmacosocial option for the profession. Experience in all fields of pharmacy practice and ability to embrace change will enable the profession to survive and prosper in the future and provide a viable option for new practitioners. A patient-centred and health promotion approach, rather than a product-centred approach will thus provide opportunities for the future.

The next chapter will show the method developed in this study to investigate facilitators and barriers to participation by pharmacists in health promotion activities. Demographic data and information about activities outside the pharmacy itself was sought, as current data in this area is particularly sparse. Aspects of rural pharmacy practice were also examined to discover whether there are any differences in

participation in health promotion activities when compared to participation by metropolitan practitioners.

Chapter 4: Methodology

4.1 Overview

This chapter begins by using the conclusions drawn from the literature reviewed, from which the research questions then emerged. The questions formed the basis for a study instrument designed to examine pharmacists' involvement in health promotion activities and the potential involvement by pharmacy students and graduate trainees in these activities. A questionnaire was chosen as the best tool for this research to obtain both quantitative and qualitative data.

How the pilot sample of pharmacists was selected to test the questionnaire, and the methods by which the sample pharmacist populations in the Tasmania and Victoria were selected are explained. The method of selection of pharmacy students and pharmacy graduate trainees for this survey is also presented.

The design and development of the questionnaire for pharmacists and pharmacy students is explained and the methods used for data collection, recording and processing of information using the SPSS 12.1 © programme, and the qualitative collection of information are all described.

The chapter concludes with a description, of the methodological assumptions and limitations of the study. The study revealed results not previously recorded in the literature, despite interpretation of questions peculiar to Tasmania and the pharmacy profession.

4.2 Description of Methodology

4.2.1 Pharmacy Research

When this study began, there was only one paper found in the pharmacy literature (Paluck et al. 1994) relating to the study area, detailing participation in health promotion activities by pharmacists outside the pharmacy setting. Paluck's study (Chapter 3, p. 91) formed the basis for this investigation, as it showed participation in activities, assumed to be outside the pharmacy, such as talks to community groups. Although pharmacists spoke to community groups and participated in community health events, Paluk's study did not identify the type of community talk given or if the community health events were inside or outside the pharmacy. The study concluded that 'Pharmacists must take the initiative to offer health education/disease prevention services as the client is often unaware of the pharmacist's capabilities in this area.' (Paluck et al. 1994, p. 392).

Over the course of this study some additional examples of health promotion in pharmacy practice in both the Australian and overseas literature, were found. In these examples, participants were usually small groups of pharmacists or individuals in community pharmacies, and the project was conducted within the pharmacy itself (Adcock 2004a, 2004b; Hournihan et al. 2003; Lumb 2004; Nisbet-Smith & Emmerton 2004; Paluck et al. 1994; Pike 2004a, 2004b).

However, Gowan (Gowan 1992) and Kritkos (Kritikos et al. 2003) described projects that specifically involved pharmacists going outside pharmacies and which used the term 'health promotion'. These were described in more detail in Chapter 3 on pages

p. 82 and p. 89 of this thesis. Other than the information provided by Gowan (1992), little detail was found about the specific nature of pharmacists' participation in health promotion activities outside the pharmacy itself, or demographic information about the participants. Gowan's study took place over two years, with some questionnaires retrospective and some prospective. In Gowan's study, and other surveys found in the literature such as that by Scavone (1997) and the Commonwealth Department of Human and Health Services (1995), there was no explanation or boundaries defining the term 'community talks'. The respondents to both these studies were not required to give details of what was provided or how recently the talks were conducted. This is still the case, as shown in the recently published *National Pharmacy Database Project* (Berbatis et al. 2003). No specific detail of what constituted a 'structured community talk' was included the Berbatis et al. study as the authors considered this degree of detail was outside the scope of the project. This survey listed provision or the intention to provide 'structured community education' as the only indicator found which could be related to this proposed study on health promotion. In summary, work by Gowan, Scavone, and the Department of Human Services and Health showed that community talks took place but did not establish a true indication of how many took place. However in the Berbatis et al. study there was no indication whether or not this service actually took place. The study described in this thesis was able to investigate actual participation over a fixed time period.

Research shows that pharmacies, not individual pharmacists, are usually surveyed for information on practice. Thus, the respondent could be the absentee owner, owner manager, owner partner, manager, or the pharmacist involved with a particular area of practice within the pharmacy setting (Berbatis et al. 2003; Paluck et al. 1994; Scavone 1997). Individual pharmacists are not targeted. In fact, Berbatis et al.

(2003), asked whether 'trained staff' engaged in a range of enhanced care services and did not stipulate whether the staff were pharmacists, pharmacy assistants or other health professionals such as nurses. As many pharmacists work part-time and are often in more than one pharmacy, information about out-of-pharmacy activities may not be recorded with the above approach. Thus, actual levels of participation by pharmacists themselves have not been measured.

No literature was found describing health promotion participation by pharmacists being influenced by age, gender and hours of work. No references were found to give a comparison of the amount of participation in health promotion activities undertaken in metropolitan versus rural areas. No references looked at the structures of undergraduate courses for health promotion content, and none explored whether this had an influence on participation in health promotion activities.

4.2.2 Research Design

The formation of this study's research questions was influenced by the paucity of literature in the area of pharmacist involvement in health promotion activities outside the pharmacy setting. To answer the research questions the study was designed to capture both quantitative and qualitative data through survey method. This then allowed subsequent analysis using the SPSS 12.1 © programme and the collation of qualitative data by emerging themes.

As shown in Chapter 2, p. 44 and p. 53, Australian pharmacy practice standards address the particular issue of health promotion in pharmacies and the potential

participation outside pharmacies mainly in the context of health education (PSA 1999, 2002, 2003b; PGA 2001). Researchers frequently have reported that pharmacists are under utilised and have a role as a driver of change with individuals within the pharmacy setting and encourage participation in other settings (Blenkinsopp et al. 2000; Bond 2000; Gowan 1992; Joffres et al. 2004).

Although the title of this thesis is 'Pharmacist Participation in Health Promotion Activities: Facilitators and Barriers', the literature suggests that pharmacists are unsure of the nature of health promotion. Australian pharmacy literature appears to use the words 'health promotion' merely to represent 'promoting health' but the entire scope of practice that could be included as health promotion as described by the *Ottawa Charter* was not evident. Internationally, in the pharmacy literature, the term 'health promotion' is also conveyed in this narrow sense. In Great Britain, structured health promotion activities often include an education programme for pharmacists and pharmacy assistants showing the scope and depth of practice that can occur (Anderson 1995, 1996, 1998; Coggans et al. 2001; Lumb 2004; Watson & McCloughan 2004). In Australia, Hournihan et al. (2003) do not specify what education on 'health promotion' was given as part of this project (despite the title of the paper), and Nisbet-Smith and Emmerton (2004) do not use the words 'health promotion' for what is clearly a health promotion project.

Initial reading of the literature revealed examples of interchangeable terminology as discussed in Chapters 2 and 3 of this thesis. Because of this known confusion in terminology, respondents in this study were not required to define the term health promotion. The assumption was made that pharmacists would not understand the depth of health promotion practice, particularly if terminology from the *Ottawa*

Charter was introduced. Accordingly, specific examples of health promotion activities were given, on the assumption that pharmacists may not consider the activity undertaken was indeed to be health promotion and, as a record over time was required, this served to help pharmacists record all activities undertaken.

The primary question to be answered through this study was, why do some pharmacists participate in community health promotion and others do not? Any practice change may be recorded in the literature as a barrier to participation and participation in these health promotion activities is indeed a practice change (Berbatis et al. 2003; Gowan 1992; Joffres et al. 2004). For pharmacists, time constraints are the most frequently cited barrier, but this study attempted to allow pharmacists to record other barriers that may not have been reported in previous surveys. These factors include perception of rural/urban/regional location, influence of hours worked per week, gender, age, and location of workplace such as a community pharmacy or hospital. The questionnaire was designed to investigate facilitators to participation such as pharmacists wishing to engage in health promotion activities, being involved because they were asked, and interest in the topic or participating for research purposes. As previous surveys have not allowed space for personal comment, adequate space was left in the questionnaires for individual ideas to be added to the suggested barriers and facilitators provided by the survey instrument.

The secondary question addressed was whether or not the way pharmacy students are trained affects their involvement in health promotion activities. In 1999, and still today in 2004, the review of course documentation Chapter 2, p. 70, revealed little health promotion theory and practice examples for students. Accordingly, the

student survey was designed to examine perceptions of potential participation in health promotion activities, giving examples for their pharmacist colleagues.

Pharmacy practice research is usually by questionnaire, focus groups, interviews and observational studies or a combination thereof (Azzapardi 2000; Bond 2000; Smith 2002), however for information collection, quantitative surveys of pharmacy practice are the most common form of research in the profession (Berbatis et al. 2003; Paluck et al. 1994; Scavone 1997). There was no qualitative research found in the area of health promotion activities outside pharmacies. In this study, it was decided to use a questionnaire as pharmacists are most familiar with this form of survey and the information collected would provide the required data for analysis.

As the pharmacist population to be surveyed was geographically dispersed both within Tasmania and Victoria, the study did not have the resources to conduct any additional method of information collection. Advantages of using a questionnaire in this case were that the respondents could be anonymous and choose whether or not to complete the survey. Due to the lack of published research in this area and the complexity of the proposed survey instrument, a low participation rate and consequently low rates of survey return was expected.

Ethics Applications

Applications for ethics approval were made twice during the research period in August 1998 and August 2002 (Appendix 4.1, Ethics Application 1998, p. A-41; Appendix 4.2 Ethics Application 2002, p. A-46). Additional Pharmacy Guild of Australia approval was sought for each questionnaire (Appendix 4.3, PGA Approval Certificates, p. A-52).

Approval was sought from the University of Tasmania Southern Ethics Committee (Human Experimentation) in August 1998, for the first questionnaire surveying Tasmanian pharmacists. This was received in September 1998.

The second application was submitted to the Southern Tasmania Social Sciences Human Research Ethics Committee in July 2002 and was granted in September 2002. The aims were the same as previously, with the exclusion of pharmacy students and graduate trainees, and also inclusion of the Victorian survey. Minor changes were requested, including updating various documents with the new name of the Ethics Committee, storage of information for 5 years, and assurance that consent forms would be separated from the questionnaire.

4.2.3 Pilot Study

The pilot survey questionnaire was designed and developed in 1998 and tested on a randomly selected group of 5% of pharmacists who had registered in Tasmania in that year. The purpose was to determine the validity of the design. Respondents were invited to make comments on a separate page, which could be then used to modify the questionnaire for the sample populations, if necessary. It was found that no significant changes were needed to the survey instrument.

There was no pilot study using the modified questionnaire sent to pharmacy students and graduate trainees. The questionnaire used was based on the pharmacist questionnaire and used wording relating to potential practice expectations study instead of requesting actual practice examples.

4.2.4 Selection of Participants

The pharmacist participants selected were all those who gave a state-based address for registration purposes, to their respective pharmacy boards. Pharmacists who gave an interstate or overseas address were excluded because only details of state-based pharmacists' participation in health promotion activities and their perceptions were required for analysis. Pharmacy students at the Tasmanian School of Pharmacy and pharmacy graduate trainees participating in the Pharmacy Board of Tasmania *Graduate Accreditation Programme* were also surveyed.

As the study took place over an extended time-frame Tasmanian pharmacists were surveyed twice, in Phase 1 Tasmanian Pharmacists 1999, and in Phase 2 Tasmanian Pharmacists 2002. Students and graduate trainees were surveyed once, in Phase 1a Tasmanian Students and Trainees 1999. A sample of Victorian pharmacists was surveyed in Phase 3 Victorian Pharmacists 2003, to allow comparison with Phase 2 Tasmanian Pharmacists 2002.

Phase 1 Tasmanian Pharmacists 1999

Pharmacist names and addresses were obtained from the registering body, the Pharmacy Board of Tasmania. The Board registration list is updated annually upon payment of registration fees due on the first day of January each year. All pharmacists in the pilot study group were excluded and the survey was sent to the remaining 95% of registered pharmacists in early 1999, giving a total of 446 questionnaires.

As all pharmacists in the state were surveyed, many practised in metropolitan areas of Hobart and its surrounds of Clarence, Glenorchy and Kingston as well as in areas which are classified as rural, such as the cities of Launceston, Burnie and Devonport.

Phase 1a Tasmanian Students and Trainees 1999

In 1999, all second- (44) and third- (40) year pharmacy students from the Tasmanian School of Pharmacy, University of Tasmania were surveyed. Also, the *Graduate Accreditation Programme* students (8) who were undertaking their pre-registration year, answered the questionnaire whilst at an education workshop. It was decided not to survey first-year students, as they would not have had sufficient exposure to the profession and the pharmacy course.

In 1999, the Graduate Diploma was an alternative programme to the Pharmacy Board of Tasmania's *Graduate Accreditation Programme* to achieve registration as a pharmacist. Graduates undertaking this option were on placement and so not available at the same time the other surveys were conducted.

Phase 2 Tasmanian Pharmacists 2002

Again, the population selected was pharmacists registered in Tasmania who gave a Tasmanian address as their Pharmacy Board Registration mailing address. All 432 pharmacists who complied with this criterion were sent the questionnaire.

Phase 3 Victorian Pharmacists 2003

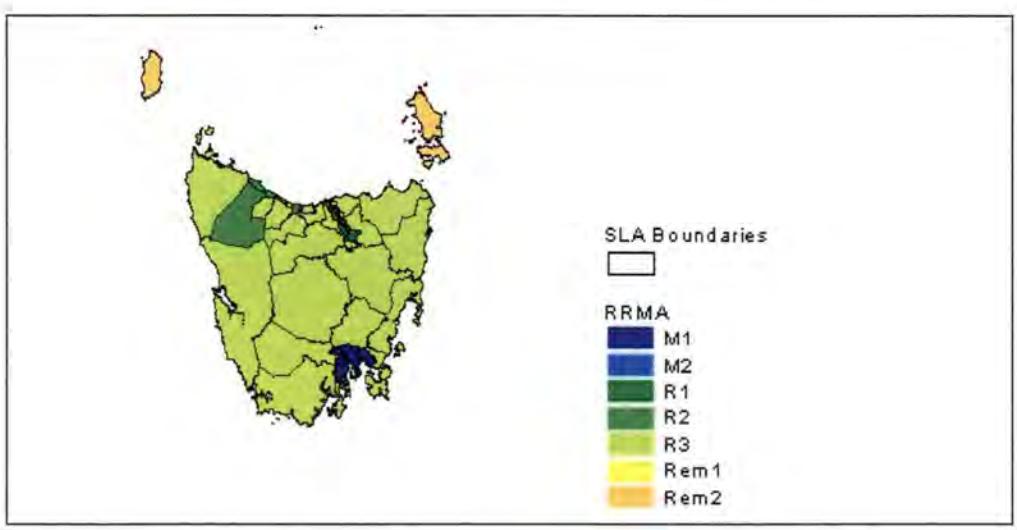
Most of Tasmania except for metropolitan Hobart and its surrounds is classified rural in various officially recognised classification structures. As this study was designed to provide an opportunity to investigate and compare pharmacist practice in

Tasmania and Victoria, an area in Victoria was selected which had a population spread similar to Tasmania using recognised rural classification scales.

RRMA Classification Scale for Tasmania

Classification scales of population were developed to rate various areas in Australia by using a scale which measures the degree of rurality and remoteness, thus allowing for equitable resource allocation. The structure of Rural and Remote Metropolitan Areas Classification (RRMA) (Department of Primary Industries and Energy and Department of Human Services and Health 1994) was based on Statistical Local Areas (SLA), and was devised by the Australian Bureau of Statistics (ABS). This rural rating scale makes Tasmania, as a state, unique. The RRMA rating for Tasmania is as follows. Hobart is the only area receiving the highest classification of Metropolitan 1 (M 1). While Flinders and King Island are classified as Remote 2 (Rem 2), the Launceston and the Tamar Valley are Rural 1 (R 1). Burnie and surrounding areas are classified as Rural 2 (R 2). All other areas in Tasmania are classified as Rural 3 (R 3).

Figure 4.1 Tasmania with RRMA and SLA Boundaries



Pharmacy itself has another classification scale called the Pharmacy (PhARIA) (Geographical Information Systems Centre of Australia 2001) rating scale using numbers 1 to 7 to classify pharmacies (Appendix 5.1, p. A-63). This scale was based on the Accessibility Remoteness Index of Australia (ARIA), (Geographical Information Systems Centre of Australia, 2001) (Appendix 5.1, p. A-62; Appendix 5.2, p. A-66; Appendix 5.3, p. A-67; Appendix 5.5, p. A-70), a classification structure developed later than RRMA. Under the PhARIA structure, three areas of Tasmania have the highest rating. They are Hobart and its immediate surrounds, Launceston, and Devonport. The latter two centres, although classified as PhARIA 1, receive additional benefits from the Rural and Remote Workforce Program and the Health Insurance Commission. Thus, the majority of Tasmania's pharmacies (59.3%, 80/135), using 2003 figures from the Pharmacy Board of Tasmania, are in rural areas (The Pharmacy Board of Tasmania 2003).

Classification and Selection for Victoria sample Area

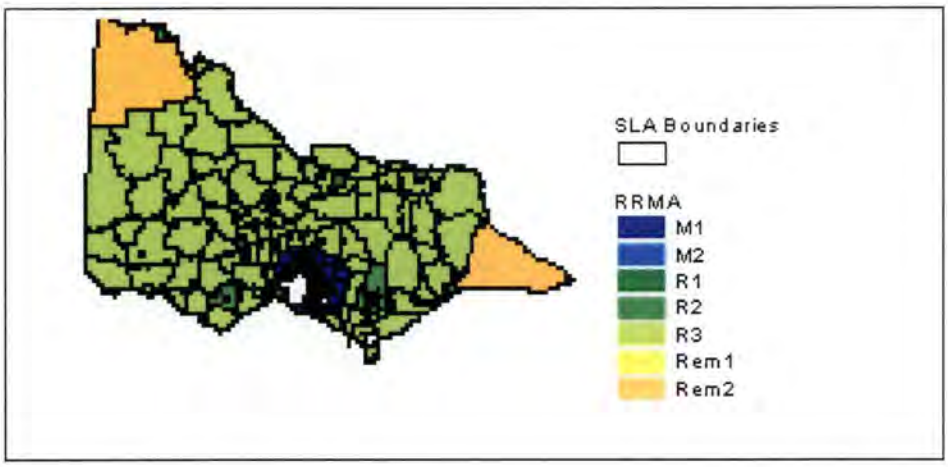
Using both ARIA and RRMA (Local Government Division Victorian Department of Communities 2002; Monash University 2002a 2003; Victorian Metropolitan Alliance 2003) classifications of rurality, a sample from Victoria was chosen to match the characteristics of Tasmania with its major population centres of the capital city of Hobart, and other the large rural centres of Launceston, Devonport and Burnie. The pharmacist registering authority, the Pharmacy Board of Victoria, was able to select pharmacists by address and postcode. Thus, by using postcodes, which are similar to SLA divisions, the RRMA rating scale was used to select sample areas with similar population size to Tasmania. Also, for this study, Local Government Areas (LGA) were used to confirm selection of the sample, as these are similar to the SLA divisions (Appendix 5.4, p. A-68).

In Victoria, the areas chosen included the SLA and LGA divisions of the area west of metropolitan Melbourne, moving north and northeast. Geelong, with a classification of RRMA R 2 was chosen to mimic Hobart. Despite Hobart being classified as a RRMA M 1 the population numbers are similar. The surveyed area then moved north to Bendigo (to mimic Launceston) but excluded Ballarat because it was a similar size to Launceston. The northern towns of Shepparton and Echuca were intended to reflect the North West Coast of Tasmania. This area is classified RRMA R 3. There were no areas in Victoria to mimic King and Flinders Islands with a RRMA Rem 2 rating.

These fifteen areas in Victoria were the LGA divisions of Greater Geelong, Surf Coast, Golden Plains, Colac–Otway, Corangamite, Moorabool, Pyrenes, Hepburn, Greater Bendigo, Mt Alexander, Loddon, Central Goldfields, Campaspe, Greater Shepparton and Moira. The map in Figure 4.2 shows the RRMA divisions and the assumption was made that this was an appropriate choice.

To confirm this selection process the pharmacy classification system, PhARIA, was used. The areas selected in Victoria for the survey receiving the highest classification and its associated restrictions were Geelong and its immediate surrounds, and Bendigo and Shepparton. Thus, this sample area is similar to the Tasmanian areas of Hobart, Launceston and Devonport. In the map in Figure 4.2, the blue area represents Melbourne but to the left (west) and towards the top (north) of this map is the study area. More details are supplied in the Appendix 5.6, p. A-71.

Figure 4.2 Victoria with RRMA and SLA Boundaries



In October 2003, the Pharmacy Board of Victoria supplied contact details for pharmacists in the selected areas.

In the sample population, the number of pharmacists was comparable with 450 pharmacists compared to Tasmania with 432. The overall populations were similar (Victoria, 450 000; Tasmania, 410 000) (ABS 2000, 2001, 2003).

4.3 Questionnaires

A questionnaire was used to investigate pharmacist involvement in health promotion, as this is the most common survey instrument used in pharmacy practice. The questionnaire was developed to investigate the activities of individual pharmacists, not the pharmacy itself. This questionnaire was developed in consultation with supervisors and the advice from the Menzies Centre for Population Health Research.

For analysis and reporting purposes, the questionnaire developed, was divided into four sections: 'Demographic Information', 'Health Promotion Participation',

'Facilitators and Barriers to Health Promotion Participation', and 'Opinions on Pharmacy Involvement'.

The study was designed to be conducted in four phases:

Phase 1 Tasmanian Pharmacists 1999

Phase 1a Tasmanian Students and Trainees 1999

Phase 2 Tasmanian Pharmacists 2002

Phase 3 Victorian Pharmacists 2003

4.3.1 Pharmacist Questionnaire

Copies of the questionnaires are in Appendix 3.1: Pharmacist Questionnaire, p. A-22 and Participant Information Letters in Appendix 3.3, p. A-35. Detail about the questions asked in each section is given below.

Demographic Information (Questions 1–12)

Demographic information was obtained about the current state of pharmacy practice, main area of pharmacy work, position within the workplace, geographical area of work, qualifications and areas of study, age, gender, year of registration, years of practice and paid hours worked.

Health Promotion Participation (Questions 13–19)

The next section, on health promotion participation, requested willingness to participate and a measure of input in activities such as community talks, newsletters and media in the past two years. Resources used and charges or potential charges were examined.

Facilitators and Barriers to Health Promotion Participation (Questions 23–24)

In the third section respondents were asked to identify facilitators and barriers to participation. Several answers were suggested for respondents enabling them to choose either one or more reasons, and space was provided for individual participant comment.

Opinions on Pharmacy Involvement (Questions 20–22, 25–29)

The last section allowed for comment on reasons why the pharmacy profession may not be asked to participate in health promotion activities, as well as on payment for activities and interest in a workshop on presenting skills. Respondents were asked to give examples of reasons for lack of pharmacist representation in relevant organisations, if known. Factors that contribute to pharmacists not being asked to participate in health promotion activities were sought and space for individual participant comment was provided.

4.3.2 Pharmacy Student Questionnaire

Copies of the questionnaires are in Appendix 3.2, Pharmacy Student Questionnaire, p. A-30, and Participant Information Letters in Appendix 3.3, p. A-35. Detail about the questions asked in each section is given below.

Demographic Information (Questions 1–8)

Background information was obtained about year of pharmacy study, potential main area of pharmacy work, potential geographical area of work, qualifications in other areas, age, and gender.

Potential Health Promotion Participation (Questions 9–16)

The second section on health promotion activities requested potential involvement and input in activities such as community talks, newsletters, media and community development projects, as well as resources required for these activities.

Facilitators and Barriers to Health Promotion Participation (Questions 17–18)

Students and trainees were asked to identify potential facilitators and barriers to participation in health promotion activities. Several options were listed for single or multiple answers with space for individual comment.

Opinions on Pharmacy Involvement (Questions 19–22)

The last section surveyed possible charges for participation and interest in a workshop on presenting skills. The respondents were asked if they knew of any organisations that lacked pharmacist involvement and may benefit from pharmacist participation. Factors that pharmacy students think may contribute to why the profession is not asked to participate to health promotion activities were sought and space for individual participant comment was provided.

4.4 Data Collection and Recording

4.4.1 Data Collection

Questionnaires were sent according to the Ethics Committee requirements of confidentiality and respondents' details were unknown unless voluntary inclusion of names and addresses for further contact was given. The questionnaire was designed

to allow names and addresses to be recorded on a separate sheet by the questionnaire respondents, and this was kept separate to the returned questionnaire itself. The questionnaires were returned in reply paid envelopes and sent to the University Department of Rural Health.

It was suspected in the Phase 1 Tasmania 1999 survey, that respondents marked 'urban' when the areas should be classified as 'rural', and as a result, surveys distributed in Phase 2 and 3 were numbered to allow inclusion of postcode data to recode results if thought necessary. As the expected low rate of correct classification of rural practice appeared, the postcode data were used. Unless the respondents provided their name, the surveys were anonymous.

Data were recorded in an Excel © spreadsheet and coded to reflect various quantitative and qualitative responses.

4.4.2 Data Processing and Analysis

The following assumptions were made to code the data for Excel © and SPSS 12.1© analysis.

Pharmacist Survey

Question 2: Respondents were asked to rank their answer into various areas of practice. As some respondents used ticks, the assumption was made that if two ticks were used, the top tick was the major workplace. The order of the options was from

most common pharmacy workplace to least common. If the respondent was not working or the questionnaire was returned, additional codes were used.

Questions 3 and 4: If more than one position within the workplace or work location was marked, a code for a combination was used.

Question 5: When requesting pharmacy qualification information, those having a Pharmaceutical Certificate or Diploma of Pharmacy were coded the same. This was the only option available at that time to obtain a pharmacy qualification. Bachelor of Applied Science (Pharmacy) was a qualification that preceded the Bachelor of Pharmacy in Tasmania and was administered by the Tasmanian College of Advanced Education but not available in other states.

Question 7: All business-related qualifications such as Bachelor of Health Economics, Bachelor of Computing, Member of the Australian Institute of Pharmacy Management (MAIPM) and Public Administration were coded with the Master of Business Administration (MBA). A group was also made of additional pharmacy-related qualifications including Bachelor of Science or Nursing, Herbal Medicine and Clinical or Hospital Pharmacy.

Questions 13–15: Although respondents may have of answered yes to participating in community talks, writing newsletters or being involved in media presentations some did not give specific details of these presentations, consequently, a lower figure will occur in some results. If respondents answered 'lots' or 'various' the number 10 was allocated in some instances for recording purposes.

Questions 16–18: If respondents used a variety of resources for information, overheads and slides or hand-outs this was coded as 'make up own' or 'both', as those provided in pre–prepared speaker's kits usually require no alterations.

Questions 20, 21, 26: In these questions, if respondents answered 'yes' or 'no' this was coded separately. If they used 'unsure', 'possibly' or 'unable to say', these answers were coded together.

Question 20: If a range of charges was entered, the lowest was recorded. If 'locum fees' was entered, a figure of $30 was recorded as an approximation of the higher 'going' rate per hour for a locum pharmacist.

Question 23: In this question about reasons for participating in health promotion, community service included such replies as promotion of the profession, giving back to the community, and the role of the pharmacist to educate.

Question 24: For barriers to participating in health promotion, answers of 'no time' and time constraints were measured together.

Pharmacy Student Survey

Question 3: Some students used ticks for potential area of practice instead of numbers. If two ticks were given, the top tick was assumed to be the major workplace.

Question 4: If more than one potential position in the workplace was marked, the code for a combination was used.

Questions 13, 14, 15, 16: In these questions, if respondents answered 'yes' or 'no' this was coded separately. If they used 'unsure', 'possibly' or 'unable to say', these answers were coded together.

Question 14: If a range of charges was entered, the lowest was recorded. If 'locum fees' was entered, a figure of $30 was recorded as an approximation of the higher current 'going' rate per hour for a locum pharmacist.

Statistical Analysis

Using SPSS 12.1© , statistical analysis was conducted by parametric and non-parametric methods. Various tests were used ranging from simple tables, frequencies, averages, and Chi^2 analysis for statistical significance (Siegel & Castellan 1988).

Respondents were not required to mark every question. Consequently, in some tables, replies may be greater or less than the total number of respondents for that survey.

Qualitative Analysis

Qualitative data was collated by Excel © spreadsheet. These were not analysed using software programmes but collated under emerging themes.

4.5 Methodological Assumptions

Assumptions were made that the geographic areas selected would provide a comparative survey group but, within the instrument itself, interpretation of the questions presented some unforeseen limitations to the data. Different wording in the questions relating to area of practice and practice location may have given a clearer demographic picture. Timing and lack of follow-up also may have compounded the low return rate. However, as can be seen from the literature, participation in this area of practice may be small and examples found provided low response rates and therefore, a high reply rate was not expected.

Geographic Areas of Survey

Some wording in the survey was identified by respondents in each survey as not fitting their needs such as 'work area'. In Question 4 (Pharmacist Survey) and Question 5 (Student Survey), on work area of practice, the term 'capital city' was used instead of the usual classification term of metropolitan, as defined in some rural classification structures (Appendix 5.1, p. A-62). This restriction did force respondents not practising in a capital city to use the options of urban or rural as provided by the survey instrument. However, this also may have allowed respondents to annotate their surveys as urban when others marked the same type of area as rural. It was suspected that Tasmanian pharmacists would not perceive some urban areas as rural and the latter surveys (Tasmanian 2002 and Victoria 2003), although anonymous, were numbered, allowing the recipient's postcode to be included in analysis. As a result, despite the respondents' interpretation of their

practice as urban, this data could be recoded as rural using the PhARIA system of rurality as a guide.

The Pharmacy Board of Victoria supplied contact details for pharmacists listed in the sample areas. Some respondents were overseas, retired or not practising as a pharmacist, yet they were still registered. As this listing was provided by postcode, the SLA divisions were used to group the sample and the assumption was made that these divisions would be close to RRMA in order to select the sample population. The survey did not use definitions of metropolitan and non-metropolitan classifications according to RRMA but capital city, urban or rural options.

Return Rate of Questionnaires

Survey methods of data collection are usual in pharmacy research. These surveys attempted to obtain data in an area not specifically investigated in the literature. This area is also one that many pharmacists may not feel is relevant. Many pharmacists feel overworked doing the day-to-day work within a pharmacy and the professional development required for the profession. A pharmacist not practising in this area may not feel the need to return the survey, compounding the problem of low return rates for analysis.

The ideal return rate of questionnaires quoted by some authors is 60% (Azzapardi 2000; Edwards, Roberts, Clarke, DiGuiseppi, Pratap, Wentz & Kwan et al. 2002; Smith 2002). However a return rate of less is considered acceptable with anonymous, complex surveys or those surveys dealing with an activity suspected of occurring in a small proportion of respondents (Barclay, Todd, Finlay, Grande & Wyatt 2002; Edwards et al. 2002; Jesson & Pocock 2001). In this study, if

pharmacists had contributed to local health promotion activities, the complex details required in the survey may have deterred busy practitioners. Usually a low return rate can be increased by additional surveys or random approaches to non-respondents (Smith 2002) however other researchers suggest that surveys may need to be sent three times to achieve a response (Barclay et al. 2002). It was not possible to use these approaches in this study.

The 1999 Tasmanian survey was not followed-up as the questionnaire would have had to have been sent to all pharmacists again, as non-responders could not be identified. In 2002, pharmacists in Tasmania were surveyed just before the Christmas season, an extremely busy time for the profession. It was thought that additional postage of surveys over this holiday period would not achieve the desired outcome of an increased response. Consequently, the Victorian 2003 sample was not followed-up to allow comparison to Tasmanian respondents under the same survey conditions. Although follow-up methods were not employed it was felt the respondents represented that the majority of those pharmacists who did participate in local health promotion activities and results and consequent conclusions of this study would take this assumption into account. As the returned surveys indicated limited participation in health promotion activities, non-participation and lack of concern about survey return were felt to be the most likely reasons for the low number of returned questionnaires.

The time over which the surveys were conducted and different interpretations of terms used may have affected results. The development and administrative survey tasks were extensive due to the size of the population, and complexity of the instrument used and restricted the ability to send follow-up questionnaires.

However, the comparison over time may provide an insight into a change in pharmacist participation in health promotion activities and opinion by the profession of this type of participation.

4.6 Summary

The research questions formed the basis for development of the questionnaires to investigate pharmacist, pharmacy student and pharmacist trainee involvement in health promotion activities. Four surveys were conducted over a five-year period to test this assumption.

Ethics approval was obtained twice over the course of the study, in 1998 and 2002. Letters seeking permission for and notification of the intended research were sent to the Pharmacy Guild of Australia (Tasmanian Branch), Pharmaceutical Society of Australian (Tasmanian Branch) and the Pharmacy Board of Tasmania. A registered survey approval number from the Pharmacy Guild of Australia national office was also obtained each time.

Not all the procedures listed in each ethics application were conducted due to time and financial constraints however there were a large number of returned questionnaires to analyse. The study used questionnaires that were devised using a research framework to enable both quantitative and qualitative analysis of the results.

Survey limitations included definition and interpretation by respondents of the terms metropolitan, urban and rural. Some respondents listed examples of community

development projects as community talks. The extended time-frame was a limitation but also an advantage, allowing analysis to be made over time. Follow-up methods were not used due to time and financial constraints thus hampering conclusions drawn from the low response rate.

The results of the four phases of this study will be presented in the following chapter in both quantitative and qualitative form to show the range of answers supplied by the various respondent groups.

Chapter 5: Results

5.1 Overview

The data provided from a total of 403 questionnaires received from pharmacists were available from three surveys conducted over 4 years. There were also 55 student replies from second, third and *Graduate Accreditation Programme* students for analysis.

The questionnaires were divided into four sections for purposes of analysis, namely:

- Demographic Information;
- Health Promotion Participation;
- Facilitators and Barriers to Health Promotion Participation; and
- Opinions on Pharmacy Involvement.

Data were individually analysed by phase to ascertain pharmacist involvement in health promotion activities and potential involvement of students. This allowed several comparisons to be made. Those results compared over time were from Phase 1 Tasmania 1999 and Phase 2 Tasmania 2002 with additional comparison to Phase 1a Pharmacy Students. Phase 2 Tasmania 2002 results, after rural reclassification, were compared to a similar population of pharmacists from the selected geographic areas of Victoria who completed the survey in Phase 3 Victoria 2003. Additional comparison across all pharmacist surveys was also undertaken to complete the quantitative analysis.

Both quantitative and qualitative results from the questionnaires are tabulated in the following section and showed little change over time for Tasmanian respondents but differences between Tasmanian and Victorian respondents. A qualitative analysis of comments made by respondents is also included, which allowed respondents to express opinions of the role of the pharmacist and the profession in health promotion activities.

It was found that rurality and gender were statistically significant factors in participation in health promotion activities. Time constraints were significant barriers to participation for some but public speaking was also a barrier. Rural pharmacists were approached more often to participate in community talks than were urban pharmacists. Qualitative comments and further opinions given by respondents noted lack of pharmacy input in various organisations, as well as observations that it was essential for pharmacists to participate in activities, despite the barriers. Thus, the results of the four phases of this study reveal the level of pharmacist participation in health promotion activities, as well as change over time within Tasmania, differences in the level of health promotion participation between pharmacists in rural areas of two states of Australia as well as students' hopes for the future. The data analysed revealed that this study discovered significant differences in pharmacists' involvement in health promotion activities in rural practice compared to pharmacists' involvement in health promotion activities in metropolitan practice.

5.2 Phase Results

Many of the frequency tables for this study are found in Appendix 6.1, p. A-72. It should be noted that respondents did not have to answer all questions and could give multiple answers to others in the areas of barriers and facilitators to participation, and also reasons why a pharmacist may be not included in health promotion activities.

5.2.1 Phase 1 Tasmania 1999

Of 446 pharmacist questionnaires distributed, 129 respondents replied to this questionnaire sent in October 1999. This is a response rate of 28.9%.

Demographic Information

The median age of respondents in this survey was in the age group 41–50 years, however 89.9% (115) of pharmacists were aged 60 or below (Table A.6.1.1, p. A-72). Of those surveyed, 55.8% were female (Table A.6.1.2, p. A-72). According to the *Pharmacy Labour Force to 2001* survey conducted in 1999 (AIHW 2003), the average age for a pharmacist is 46.1 (average age for females 41.7; for males 50.0). In that survey 48.5% of Tasmania's pharmacists were female compared to the national average of 46.9%. Therefore, this survey population is approximately comparable to that of all Tasmania pharmacists.

The major workplace for most respondents was community pharmacy 82.2% (106) of respondents (Table A.6.1.3, p. A-72). For 3 of another 12 respondents, this was their second major workplace (Table A.6.1.4, p. A-73). The second highest major

workplace was in a hospital pharmacy 14% (18), followed by education, research and government. Only 2 respondents were not working. Nationally (AIHW 2003), 80.2% of pharmacists work in community practice while 17% are in hospital pharmacies as described in this report, published in 2003, but which used Tasmanian data from 1999.

Table A.6.1.5, p. A-73 showed that half of the pharmacists (70/129) worked less than 40 hours per week and the remainder (58, 45.3%) worked 40 or more hours per week. This table does not separate male and female pharmacists but female pharmacists are likely to work three-quarters of the hours of male pharmacists: 32.8 hours compared to 41.9 (AIHW 2003, p. 12).

One-third of pharmacists indicated their work area as the capital city (Table 5.1). Only 25.2% believed they that worked in a rural area or a combination of areas. However as explained previously it was thought that Tasmanian pharmacists may code rurally classified cities of Launceston, Devonport and Burnie as urban. As this survey was completed anonymously, no reclassification was possible.

Table 5.1 Phase 1 Tasmanian Pharmacists 1999—Area of Practice

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Capital City	43	33.3	33.9	33.9
	Urban Area	52	40.3	40.9	74.8
	Rural Area	27	20.9	21.3	96.1
	Combinat-ion	5	3.9	3.9	100.0
	Total	127	98.4	100.0	
Missing	System	2	1.6		
Total		129	100.0		

Two-thirds of this sample (63.6%, 82) held the Bachelor of Pharmacy degree (Table A.6.1.6, p. A-73) while 8.5% (11) held the Bachelor of Applied Science (Pharmacy)

and the rest of the respondents held Pharmaceutical Certificate or diploma (27.1%, 35). In Table A.6.1.7, p. A-74, five pharmacists held postgraduate pharmacy qualifications of a Master or an Honours degree. No respondent in this sample had a doctorate. The Australian College of Pharmacy Practice had 22.5% (29) of pharmacists as members while only 7% (9) have the required Australian Association of Consultant Pharmacist accreditation. About 10% (13) pharmacists hold other additional pharmacy-related qualifications, including diplomas of clinical and hospital pharmacy, nutrition or herbal medicine.

Health Promotion Participation

As seen in Table 5.2, 37% (47) of respondents had given a community talk in the past 2 years. Although 2 respondents had given 10 talks (a number chosen to represent the reply of 'lots' or 'numerous' or 'various'), 95.7% (44) had given fewer with over half of this number (27) only giving 1 or 2 talks in the study time period.

Table 5.2 Phase 1 Tasmanian Pharmacists 1999—Community Talks—Frequency and Number

a. Frequency of Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	47	36.4	37.0	37.0
	No	80	62.0	63.0	100.0
	Total	127	98.4	100.0	
Missing	System	2	1.6		
Total		129	100.0		

b. Number of Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	19	14.7	41.3	41.3
	2	8	6.2	17.4	58.7
	3	7	5.4	15.2	73.9
	4	4	3.1	8.7	82.6
	5	5	3.9	10.9	93.5
	6	1	.8	2.2	95.7
	10	2	1.6	4.3	100.0
	Total	46	35.7	100.0	
Missing	System	83	64.3		
Total		129	100.0		

Of the 29 respondents who had written newsletters 25 responded, but of this number 64% (16) had only written one or two. Again, for respondents who annotated their questionnaire with 'lots' or 'numerous' or 'various', for purposes of analysis the number of 10 was chosen to represent this figure (Table 5.3).

Table 5.3 Phase 1 Tasmanian Pharmacists 1999—Newsletters—Frequency and Number

a. Frequency of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	29	22.5	25.0	25.0
	No	87	67.4	75.0	100.0
	Total	116	89.9	100.0	
Missing	System	13	10.1		
Total		129	100.0		

b. Number of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	9	7.0	36.0	36.0
	2	7	5.4	28.0	64.0
	4	3	2.3	12.0	76.0
	8	1	0.8	4.0	80.0
	9	1	0.8	4.0	84.0
	10	4	3.1	16.0	100.0
	Total	25	19.4	100.0	
Missing	System	104	80.6		
Total		129	100.0		

Not all respondents who participated in this activity gave details of events.

Fewer respondents had participated in media presentations. Of the 13 respondents, 75% (9) has been involved fewer than 4 times in the past 2 years (Table 5.4).

Table 5.4 Phase 1 Tasmanian Pharmacists 1999—Media Presentations—Frequency and Number

a. Frequency of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	13	10.1	10.5	10.5
	No	111	86.0	89.5	100.0
	Total	124	96.1	100.0	
Missing	System	5	3.9		
Total		129	100.0		

b. Number of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	4	3.1	33.3	33.3
	2	3	2.3	25.0	58.3
	3	1	0.8	8.3	66.7
	4	1	0.8	8.3	75.0
	10	3	2.3	25.0	100.0
	Total	12	9.3	100.0	
Missing	System	117	90.7		
Total		129	100.0		

Not all respondents who participated in this activity gave details of events.

Most pharmacists preferred to find their own information and make up their own handouts and other resources. Only 3 used a speaker's kit for talks, publications or the media for information but 41 (31.8%) of those who answered this question did their own research but 8 (6.2%) used both (Table A.6.1.8, p. A-74). Many used resources from professional groups and drug companies however while 2 respondents used speaker's kits, 35 made up their own and 6 used both to provide the background, handouts or slides necessary for their presentation or publication (Table A.6.1.9, p. A-74). For handouts 84.9% (38) participants usually made their own (Table A.6.1.10, p. A-75). Of those respondents, who participated in the health promotion activities nominated by the survey, not all replied to these questions. Overall pharmacists appear to do their own research and make their own resources for these activities.

Nineteen pharmacists (14.7%, 19/129) identified participation in community development activities; however, others included these activities in the section detailing community talks (Table A.6.1.11, p. A-75). The most frequent projects for the profession to be involved in were Wise Use of Medicines or medicines safety, falls prevention and asthma programmes. The survey suggested the first two as options for respondents. Pharmacists did not appear to be involved in planning of these events.

Facilitators and Barriers to Health Promotion Participation

Most research shows the barriers for health promotion activities but this study also investigated reasons for participating in these activities. There were four options put forward in the questionnaire but an additional fifth point emerged, that of community service, which included answers such as promotion of the profession or business or a duty to give back to the community. Respondents could mark more than one item in this question.

Table 5.5 Phase1 Tasmanian Pharmacists 1999—Facilitators for Participation in Health Promotion Activities

Facilitator	Frequency	Percent.
Would like to do this	28	21.7
Someone asked me	46	35.7
Interest in the topic	28	21.7
Research	5	3.9
Community service	8	6.3

Respondents could mark more than one facilitator.

Percentage of total sample (129)

Although from the Table 5.5, 21.7% (28) of pharmacists would like to participate in health promotion activities, the greatest barrier is no time or time constraints identified by 60.5% (78) of pharmacists (Table 5.6). Most pharmacists gave community talks because someone asked them to (46, 35.7%), but interest in the topic was the stimulus for 21.7% (28). Community service was also given as a reason by 6.3% (8). One-fifth of surveyed pharmacists (28, 21.7%) had never been

approached but all pharmacists saw this participation as part of the pharmacist's role. Thirty-three per cent of pharmacists (43) felt a lack of experience or lack of confidence speaking publicly was a major barrier, a barrier not appearing in the literature reviewed for this study.

Table 5.6 Phase 1 Tasmanian 1999 Pharmacists—Barriers to Participation in Health Promotion Activities

Barrier	Frequency	Percent.
No time or time constraints	78	60.5
Not a pharmacist's role	0	0
Never been approached	28	21.7
Lack of experience speaking publicly /confidence	43	33.3

Respondents could mark more than one barrier.

Percentage of total sample (129)

Opinions on Pharmacy Involvement

Payment would entice two-thirds of pharmacists into participation in health promotion activities. Approximately even numbers would like to be paid and said either yes, no or for out-of- pocket expenses only (30, 27.5%; 41, 37.6%; 38, 34.9% respectively) (Table A.6.1.12, p. A-75). Suggested charges ranged from nil, to $20, to covering of locum expenses (equating to $30), to a maximum of $200, but for 81.3% the charge would be $50 or less (Table A.6.1.13, p. A-76) despite the obvious time involved. However, it appears most pharmacists would not actually charge for community talks (74/76, 97.4%) or for media commitments (59) (Table A.6.1.14, p. A-76).

Two-thirds (67, 63.8% Yes; 8, 7.6% Possibly) of the respondents would consider participating in health promotion activities if their presenting skills could be developed and would come to a free workshop (74, 64.3% Yes; 4, 3.5% Possibly) (Table A.6.1.15, p. A-77).

From Table 5.7 pharmacists demonstrated strong views on why the profession is left out of health promotion activities.

Table 5.7 Phase 1 Tasmanian Pharmacists 1999—Reasons Why Pharmacists Are Not Included in Health Promotion Projects

Reason	Frequency	Percent.
Lack of understanding of pharmacist's skills	89	69
Pharmacy has poor links with other organisations or services	53	41.1
Unmanageable time of requests	35	27.1

Respondents could mark more than one reason.

Percentage of total sample (129)

Seventy-per cent (89) of pharmacists felt there was a public or community lack of understanding of the depth of their skills while over 40% (53) felt the profession has poor links with other organisations or services. One-quarter (35, 27.1%) felt that unmanageable time of requests contributes to no pharmacists being involved in health promotion activities. An example of this difficulty for pharmacists includes health promotion projects being planned and conducted during normal pharmacy opening hours.

5.2.2 Phase 1a Students Tasmania 1999

Replies were obtained from 17/44 (38.6%) second-year students, 31/40 (77.5%) third-year, and 7/ 8 (87.5%) graduate trainee students (Table 5.8). In 1999, the pharmacy degree was of three years duration, with an optional Graduate Diploma year instead of the *Graduate Accreditation Programme*. The 12 students in the diploma group were not surveyed. Student respondents would also include some international students who may plan to return home and work in a community pharmacy, hospital pharmacy or in the pharmaceutical industry.

Table 5.8 Phase 1a Pharmacy Students 1999—Student Year

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Tasmanian Graduate Accreditation Programme (GAP)	7	12.7	12.7	12.7
	2nd Year Students Tasmania	17	30.9	30.9	43.6
	3rd Year Students Tasmania	31	56.4	56.4	100.0
	Total	55	100.0	100.0	

Demographic Information

Two-thirds of students in this cohort were under 30 years of age (35, 63.6%), and one-third was aged 17–21 (19, 34.5%) while one student was in the 31–40 age range (Table A.6.1.16, p. A-78). The gender ratio was 69.1% (38) female to 30.9% male (Table A.6.1.17, p. A-78). This reflected the approximate percentages in the respondents starting year (AIHW 2003, p. 38). The latest available figures in 2000 indicated 65.9% of students commencing pharmacy were female (AIHW 2003, p. 38). Table A.6.1.18, p. A-78, indicated five students had previous qualifications such as science and nursing.

Students and graduates were asked in which area of pharmacy they would like to work in the future. Only 66.7% (36) thought their career path led to community pharmacy while 27.8% (15) wanted to work in a hospital pharmacy (Table A.6.1.19, p. A-78). As a second place of work, two thirds (20, 62.5%) also would like a hospital career, while nearly 20% (6) also wanted community pharmacy experience as well as education (3) (Table A.6.20, p. A-79). Students would obviously like to experience all facets of pharmacy practice. Nationally, 14.2% of pharmacists work in hospitals (AIHW 2003, p. 5) which indicates that only half the students in this study will achieve their initial career goal.

Rural practice was the third choice for respondents as an area of potential practice. Only 14.5% (8) chose rural practice first, and 29.1% (16) chose urban, but half (27, 49.1%) chose a capital city or metropolitan area in which to practice. Four students (7.3%) would like to practice in a combination of these areas (Table 5.9). Again, the apparent Tasmanian perception of rural may have an influence here.

Table 5.9 Phase 1a Pharmacy Students 1999—Potential Area of Practice

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Capital City	27	49.1	49.1	49.1
	Urban Area	16	29.1	29.1	78.2
	Rural Area	8	14.5	14.5	92.7
	Combinat-ion	4	7.3	7.3	100.0
	Total	55	100.0	100.0	

Facilitators and Barriers to Health Promotion Participation

It can be seen from Table 5.10, that although 85.5% (47) of respondents said they would consider participating in community talks in the future, 10.9% (6) said no, while 3.6% (2 respondents) were already participating in community talks at the time of the survey. Those participants participating in community talks were graduate trainees. Newsletter participation rated the lowest among pharmacists in the same year (29, 25%) (Chapter 5, p. 138) compared to the 61.9% (34) of students and trainees who would be willing to do this in the future. One respondent was already writing newsletters. Two-thirds of respondents (35, 63.6%) would consider media participation sometime in the future (Table 5.10).

Table 5.10 Phase 1a Pharmacy Students 1999—Community Talks, Newsletters and Media Presentations

a. Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Already Doing This	2	3.6	3.6	3.6
	No	6	10.9	10.9	14.5
	Yes, Sometime in the Future	47	85.5	85.5	100.0
	Total	55	100.0	100.0	

b. Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Already Doing This	1	1.8	1.8	1.8
	No	20	36.4	36.4	38.2
	Yes, Sometime in the Future	34	61.8	61.8	100.0
	Total	55	100.0	100.0	

c. Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	20	36.4	36.4	36.4
	Yes, Sometime in the Future	35	63.6	63.6	100.0
	Total	55	100.0	100.0	

Examples of community development projects such as Falls Prevention Programmes, School Health Week or Wise Use of Medicines Campaigns were projects 87.3% (48) that students and graduates would consider being part of, while three graduates (5.5%) were participating already, and only four (7.3%) would not consider being part of these community activities (Table A.6.1.21, p. A-79).

Facilitators and Barriers to Health Promotion Participation

Half the students (28, 50.9%) appeared favourable to the idea of participation in health promotion activities, especially if interested in the topic (31, 56.4%). If asked,

36.4% (20) would participate. Community service was an unsolicited response given by 10 (8.2%) students and trainees to this question (Table 5.11), which is a higher rate than the pharmacist survey in the same year (8, 6.3%) (Chapter 5, p. 140).

Table 5.11 Phase 1a Pharmacy Students 1999—Facilitators for Participation in Health Promotion Activities

Facilitator	Frequency	Percent.
Would like to do this	28	50.9
Someone asked me	20	36.4
Interest in the topic	31	56.4
Research	3	3
Community service	10	18.2

Respondents could mark more than one facilitator.

Percentage of total sample (55)

The major perceived barrier of time constraints was the same as for students (32, 58.2%) and the pharmacists (78, 60.5%) (Chapter 5, p. 141) of the Phase 1 Tasmanian Pharmacists 1999 survey. Despite numerous presentations during the course of their undergraduate degree, lack of experience speaking publicly and lack of confidence were barriers for 34.5% (19) of participants. Students noted, that as yet, they had not been approached to participate in health promotion activities (Table 5.12).

Table 5.12 Phase 1a Pharmacy Students 1999—Barriers to Participation in Health Promotion Activities

Barrier	Frequency	Percent.
No time	32	58.2
Not a pharmacist's role	1	1.8
Never been approached	23	41.8
Lack of experience speaking publicly /confidence	19	34.5

Respondents could mark more than one barrier.

Percentage of total sample (55)

Students would consider this type of health promotion activity if payment were available, as shown in Table A.6.1.22, p. A-79. Payment or coverage of out of pocket expenses would be an inducement to participate for 92.3% (48) of respondents. Students also commented that if the talk or commitment was a

community service or from a non-profit organisation they would not charge (35, 66%). Of those who would charge, 9 (16.9%) would charge less than $50 (Table A.6.1.23, p. A-80). Some said payment for talks to professional bodies or by those who had funds was appropriate. Payment for media participation would be considered depending on the preparation and time commitment involved, but as can be seen from Table A.6.1.23, p. A-80, half (30, 58.8%) would not charge for this service, however 10 felt they were unable to say. On the whole, although students would like to be paid or reimbursed for expenses, payment was not a driver to participate and most would give their time freely for community talks or media presentations.

Opinions of Pharmacy Involvement

Nearly 93% (49, 92.5%) of respondents would participate in health promotion activities if their presenting skills could be improved and 85.2% (46) would come to a free workshop designed to improve skills, make the most of available resources and develop group work skills (Table A.6.1.24, p. A-80).

Over 80% (45, 81.8) of students felt very strongly there was a public or community lack of understanding about the role of a pharmacist. Nearly one-third (16, 29.1%) felt that the profession has poor links with other organisations and services. However, fewer thought unmanageable time of requests may be an issue compared to their qualified colleagues in the same year (10, 18.2% compared to 35, 27.1%) (Table 5.13).

Table 5.13 Phase 1a Pharmacy Students 1999—Reasons Why Pharmacists Are Not Included in Health Promotion Projects

Reason	Frequency	Percent.
Lack of understanding of skills a pharmacist can offer	45	81.8
Pharmacy has poor links with other organisations and services	16	29.1
Unmanageable time of requests	10	18.2

Respondents could mark more than one reason.

Percentage of total sample (55)

5.2.3 Phase 2 Tasmania 2002

The response rate from this survey, sent in November 2002 was 34.95% (151/432).

Demographic Information

In this survey, Table A.6.1.25, p. A-81 shows nearly two-thirds of pharmacists surveyed were less than 50 years of age (102, 67.5%), however there were 4 pharmacists still practising while over 70 years of age. Respondents were 55% female (83) and 45% (68) male (Table A.6.1.26, p. A-81), which is similar to the latest available figures for the national average, as shown previously (Chapter 2, p. 60).

The proportion of pharmacists in community practice was 79.9% (122) (Table A.6.1.27, p. A-81), which is comparable to the national average of 80.2% (AIHW 2003, p. 5). Another 4.6% (7) said that their second major workplace was also community pharmacy (Table A.6.1.28, p. A-82). Of those remaining, 12.4% (19) practised hospital pharmacy while only 5.9% (9) were in education, research or with the government (Table A.6.1.27, p. A-81).

Pharmacists who worked 40 or more hours per week made up the largest group at 40.7% (61) but it can be seen that three-quarters of the respondents worked 30 or more paid hours per week (83/129) (Table A.6.1.29, p. A-82). The national average, in 1999 for pharmacists was 37.8 hours per week however the hours worked by female pharmacists are fewer than for male pharmacists (AIHW 2003, p. 12). The median number of hours worked by this Tasmanian group falls in the bracket 31–40 hours per week but the mode was in the 40 or more hours per week.

From Table 5.14, only 25.4% (34) of pharmacist surveyed worked in a rural area or a combination of areas. This figure may be lower than expected for Tasmania, as most Tasmanians respondents would not consider larger towns and cities in the north as rural, despite approved rural classifications of these areas. When reclassified, in Table 5.15, using a postcode of 7055 and above as rural, this proportion changes. Areas with postcodes above 7055 exclude the surrounds of Hobart (which includes the municipalities of Greater Hobart, Glenorchy, Clarence and Kingston). The assumption was made that a rural address given to the Pharmacy Board for registration purposes was near the working environment of pharmacist respondents. There are now 48.7% (73) of the pharmacists surveyed in this sample; double that could be classified as rural previously.

Table 5.14 Phase 2 Tasmanian Pharmacists 2002—Area of Practice

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Capital City	54	35.3	36.0	36.0
	Urban Area	58	37.9	38.7	74.7
	Rural Area	34	22.2	22.7	97.3
	Combinat-ion	4	2.6	2.7	100.0
	Total	150	98.0	100.0	
Missing	System	3	2.0		
Total		153	100.0		

Table 5.15 Phase 2 Tasmanian Pharmacists 2002—Area of Practice/Reclassified

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Capital City	54	35.3	36.0	36.0
	Urban Area	19	12.4	12.7	48.7
	Rural Area	73	47.7	48.7	97.3
	Combinat-ion	4	2.6	2.7	100.0
	Total	150	98.0	100.0	
Missing	System	3	2.0		
Total		153	100.0		

Nearly one-third of respondents (43, 28.9%) had a Pharmaceutical Certificate or diploma as their qualification to practise pharmacy, 8.7% (13) had the Bachelor of Applied Science (Pharmacy), while 62.4% (93) had a Bachelor of Pharmacy degree (Table A.6.1.30, p. A-82). Only six pharmacists held master and/or doctorate degrees. One-fifth of respondents (33, 21.6%) had ACPP membership while 13 respondents had received AACP accreditation. Pharmacy-related qualifications including clinical and herbal qualifications as well as degrees in science were held by 15% (23) in this sample. Another 12.4% (19) were currently studying for a further qualification (Table A.6.1.31, p. A-83).

Health Promotion Participation

About forty per cent (64, 42.4%) of pharmacists surveyed responded that they had given community talks in the past two years. However, 75% (48) had given two or fewer and 57.8% (37) had only given one. The maximum number of talks given by pharmacists was six, with only eight pharmacists giving four or more (Table 5.16) although nearly half the respondents had given community talks, the number given was actually very low for the time period specified by this study.

Table 5.16 Phase 2 Tasmanian Pharmacists 2002—Community Talks—Frequency and Number

a. Frequency of Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	64	41.8	42.4	42.4
	No	87	56.9	57.6	100.0
	Total	151	98.7	100.0	
Missing	System	2	1.3		
Total		153	100.0		

b. Number of Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	37	24.2	57.8	57.8
	2	11	7.2	17.2	75.0
	3	8	5.2	12.5	87.5
	4	3	2.0	4.7	92.2
	5	3	2.0	4.7	96.9
	6	2	1.3	3.1	100.0
	Total	64	41.8	100.0	
Missing	System	89	58.2		
Total		153	100.0		

As can be seen in Table 5.17, only 16.5% (23) of pharmacists had written newsletters in the past two years. All gave details of publications but half of the respondents (13, 56.5%) had only written one newsletter. The highest number written by two respondents was 10 each, representing the reply of 'lots', 'numerous' or 'various'.

Table 5.17 Phase 2 Tasmanian Pharmacists 2002—Newsletters—Frequency and Number

a. Frequency of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	23	15.0	16.5	16.5
	No	116	75.8	83.5	100.0
	Total	139	90.8	100.0	
Missing	System	14	9.2		
Total		153	100.0		

b. Number of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	13	8.5	56.5	56.5
	2	4	2.6	17.4	73.9
	3	2	1.3	8.7	82.6
	4	2	1.3	8.7	91.3
	10	2	1.3	8.7	100.0
	Total	23	15.0	100.0	
Missing	System	130	85.0		
Total		153	100.0		

Even fewer pharmacists played a part in media presentations, and of those, five (3.4%) who took part in this activity, only four participated on one to three occasions. One respondent, however, contributed to media presentations on 20 occasions in 2 years (Table 5.18).

Table 5.18 Phase 2 Tasmanian Pharmacists 2002—Media Presentations—Frequency and Number

a. Frequency of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	5	3.3	3.4	3.4
	No	141	92.2	96.6	100.0
	Total	146	95.4	100.0	
Missing	System	7	4.6		
Total		153	100.0		

b. Number of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	3	2.0	60.0	60.0
	3	1	0.7	20.0	80.0
	20	1	0.7	20.0	100.0
	Total	5	3.3	100.0	
Missing	System	148	96.7		
Total		153	100.0		

For presentations, again pharmacists preferred to research their own information (52, 34%), make their own resources (overheads and slides) (39, 76.5%) and hand-outs (42, 27.5%) compared to using pre-prepared speaker's kits (Tables A.6.1.32,

A.6.1.33, p. A-83; A 6.1.34, p. A-84). Respondents used information gained from a variety of sources.

Of the 37 pharmacists from the total sample of 151 who answered the question on community development, only 22 (59.5%, or 14.6% of the whole sample) had contributed in the areas of Wise Use of Medicines, workplace safety, careers week, and medicines and herbs. Generally, pharmacists appeared to give talks or participated in these events but not in the planning (Table A.6.1.35, p A-.84).

Facilitators and Barriers to Health Promotion Participation

The major reason for participation in these activities by the respondent pharmacist sample was because someone asked the pharmacist to do so (66, 43.1%) (Table 5.19). One-fifth of pharmacists would like to participate (28, 18.3%) and a facilitator to participation was interest in the topic (28, 18.3%). Community service and research would each motivate 5.9% (9) of the respondents to participate in health promotion activities.

Table 5.19 Phase 2 Tasmanian Pharmacists 2002—Facilitators for Participation in Health Promotion Activities

Facilitator	Frequency	Percent.
Would like to do this	28	18.3
Someone asked me	66	43.1
Interest in the topic	28	18.3
Research	9	5.9
Community service	9	5.9

Respondents could mark more than one facilitator.

Percentage of total sample (153)

No time available or time constraints were the major barriers, with 95 (62.1%) of pharmacists recording this obstruction to participation (Table 5.20). Only two respondents thought it was not a pharmacist's role and 33 (21.6%) respondents had never been approached. Lack of experience speaking publicly or lack of confidence

was recorded by 29.4% (45), a number similar that to the previous Tasmanian survey of 1999 (Chapter 5, p. 141).

Table 5.20 Phase 2 Tasmanian Pharmacists 2002—Barriers to Participation in Health Promotion Activities

Barrier	Frequency	Percent.
No time or time constraints	95	62.1
Not a pharmacist's role	2	1.3
Never been approached	33	21.6
Lack of experience speaking publicly /confidence	45	29.4

Respondents could mark more than one barrier.

Percentage of total sample (153)

Opinions on Pharmacy Involvement

Two-thirds of pharmacists (49, 35.5% Yes; 40, 29% Out of Pockets) would consider participation in health promotion projects with payment or reimbursement of out of pocket expenses but for the rest this would not change their minds (46, 33.3%) (Table A.6.1.36, p. A-84).

The maximum any pharmacist would charge is $150, but 81.6% would charge $50 or less (Table A.6.1.37, p. A-85). However, when respondents were asked about actual charges, 94.9% (94) of the 99 who answered this question would not charge for community groups. The same percentage (75/79, 94.9%) would not charge for media presentations (Table A.6.1.38, p. A-85).

Similarly to Phase 1 Tasmania 1999, over half (85/129 65.6%) of the respondents would participate if they could improve their presentation skills, and (90/144, 62.5%) would come to a free workshop (Table A.6.1.39, p. A-86).

Table 5.21 Phase 2 Tasmanian Pharmacists 2002—Reasons Why Pharmacists Are Not Included in Health Promotion Projects

Reason	Frequency	Percent.
Lack of understanding of pharmacist's skills	108	70.6
Pharmacy has poor links with other organisations or services	55	35.9
Unmanageable time of requests	72	47.1

Respondents could mark more than one reason.

Total Number of respondents (153)

Pharmacists felt that there were several reasons why pharmacists were not asked to participate in the activities suggested by the questionnaires (Table 5.21). Again, nearly three-quarters of respondents (108, 70.6%) thought there was a public or community lack of understanding of the depth of pharmacist knowledge and skills. Poor links with other organisations or services was suggested by 36% (55) of respondents as the reason for pharmacists not being included. About half (72, 47.1%) of the pharmacists who were surveyed considered unmanageable time of requests contributed to their profession not participating in health promotion activities.

5.2.4 Phase 3 Victoria 2003

The response rate for this survey sent to Victorian pharmacists was 28.24% (122/432).

Demographic Information

The range in age is depicted in Table A.6.1.40, p. A-87. The median age was in the third group (41–50), which is comparable to the national average age for practising pharmacists and the other Tasmanian surveys. About half of this population was over 50 (48, 45.3%) with two pharmacists at over 70 years of age practising. Also,

half (57, 53.8%) of those pharmacists surveyed in this Victorian sample were female. (Table A.6.1.41, p. A-87).

Seventy-two per cent (87) of respondents worked in community pharmacy. In the survey, 14% (17) of the questionnaires were returned as the pharmacist was not working, was overseas or the survey was marked return to sender. With these removed there were 104 respondents working of whom 83.7% worked in community pharmacy, which is closer to the national average of 80.2% (AIHW 2003, p. 5) (Table A.6.1.42, p. A-87). An additional 2.5% also stated that community pharmacy was their second major workplace (Table A.6.1.43, p. A-87). Of those remaining, using the total sample of 122, 16 (13.2%) respondents worked in hospital pharmacy, and one in research. As a second major workplace, community pharmacy, hospital or education was listed by each of 2.5% (3) of respondents (Tables A.6.1.42 and A.6.1.43, p. A-87).

Many pharmacists surveyed had additional qualifications to those required to practise as a pharmacist in Australia. Pharmacy-related qualifications included degrees in science and diplomas in clinical and hospital pharmacy (18, 15.7%) (Table A.6.1.45, p. A-88). Two-thirds of this Victorian sample had a pharmacy degree (83, 68.8%) while nearly 20% had a Pharmaceutical Certificate or diploma (22, 18.2%) (Table A.6.1.44, p. A-88). A similar number of pharmacists (29, 24%) held ACPP membership when compared with Tasmanian pharmacists in 2002 (33, 21.6%), however double the number were accredited by the AACP. In Victoria, 15.7% (19) of pharmacists held this qualification compared to only 8.5% (13) of Tasmanian pharmacists. Eight pharmacists (6.6%) were studying for other qualifications (Table A.6.1.45, p. A-88).

One-third of pharmacists who responded to the questionnaire worked up to 30 paid hours per week (38, 35.8%), one-third worked between 31–40 hours per week (32, 30.2%) and the rest worked more than 40 hours per week (36, 34%) (Table A.6.1.46, p. A-88).

The Victorian sample did not include Melbourne and its environs so the option on the questionnaire of 'capital city' could not be used by this sample. Although in Table 5.21, one respondent has marked this as a work area, it is probable that their registration address was not near their place of work. A little over half (67, 55.4%) the pharmacists worked in a rural location (Table 5.22). This is double the rate found in the Tasmanian samples but closer to the rate of 48.7% rural location in the reclassified Phase 2 Tasmania 2002 sample (Table 5.15, p. 150).

Table 5.22 Phase 3 Victorian Pharmacists 2003—Area of Practice

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Not Working/Overseas/Return to Sender	16	13.2	13.2	13.2
	Capital City	1	0.8	0.8	14.0
	Urban Area	36	29.8	29.8	43.8
	Rural Area	67	55.4	55.4	99.2
	Mixed	1	0.8	0.8	100.0
	Total	121	100.0	100.0	

Health Promotion Participation

From the following table (Table 5.23) it can be seen that the actual contribution of the pharmacy profession in terms of community talks, newsletters and media presentations is quite small. Although 46.2% (49) of respondents indicated that they had given community talks in the past two years, one respondent gave no details of presentations (Table 5.23). Over 80% (40) had given four or fewer during that time.

The remaining 14.6% (8) respondents had given regular community talks, with one respondent giving 32.

Table 5.23 Phase 3 Victorian Pharmacists 2003—Community Talks—Frequency and Numbers

a. Frequency of Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	49	40.5	46.2	46.2
	No	57	47.1	53.8	100.0
	Total	106	87.6	100.0	
Missing	System	15	12.4		
Total		121	100.0		

b. Number of Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	18	14.9	37.5	37.5
	2	11	9.1	22.9	60.4
	3	7	5.8	14.6	75.0
	4	4	3.3	8.3	83.3
	5	1	0.8	2.1	85.4
	6	1	0.8	2.1	87.5
	8	1	0.8	2.1	89.6
	10	3	2.5	6.3	95.8
	12	1	0.8	2.1	97.9
	32	1	0.8	2.1	100.0
	Total	48	39.7	100.0	
Missing	System	73	60.3		
Total		121	100.0		

From Table 5.24, only 23.5% (23) had written a newsletter in the study time-frame. When asked how many had been written, only 16 respondents replied. Twelve (75%) of these had only written one or two. Two respondents had written newsletters bimonthly and monthly. The total number of respondents who had written newsletters represents only 19% of the total sample (19/121).

Table 5.24 Phase 3 Victorian Pharmacists 2003—Newsletters—Frequency and Number

a. Frequency of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	23	19.0	23.5	23.5
	No	75	62.0	76.5	100.0
	Total	98	81.0	100.0	
Missing	System	23	19.0		
Total		121	100.0		

b. Number of Newsletters

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	9	7.4	56.3	56.3
	2	3	2.5	18.8	75.0
	4	1	0.8	6.3	81.3
	6	1	0.8	6.3	87.5
	12	1	0.8	6.3	93.8
	24	1	0.8	6.3	100.0
	Total	16	13.2	100.0	
Missing	System	105	86.8		
Total		121	100.0		

The following table indicated ten pharmacists (9.5%) had participated in media presentations. Of the eight who recorded details, 87.5% (7) participated only once or twice in 2 years. Table 5.25 revealed that on only 16 occasions in two years did the profession contribute to media presentations in this study area.

Table 5.25 Phase 3 Victorian Pharmacists 2003—Media Presentations—Frequency and Number

a. Frequency of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	10	8.3	9.5	9.5
	No	95	78.5	90.5	100.0
	Total	105	86.8	100.0	
Missing	System	16	13.2		
Total		121	100.0		

b. Number of Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	1	4	3.3	50.0	50.0
	2	3	2.5	37.5	87.5
	6	1	0.8	12.5	100.0
	Total	8	6.6	100.0	
Missing	System	113	93.4		
Total		121	100.0		

Information for health promotion activities was obtained from pre-prepared speaker's kits and made up by the pharmacist himself or herself. Although for 23 (19%) pharmacists, this was obtained from pre–prepared speaker's kits or a combination of resources (Table A.6.1.47, p. A-89), 40 (33.1%) respondents preferred to obtain their own information. Pharmacists preferred to develop their own or use a combination of resources (33, 27.3%; resources; 36, 29.7% hand-outs) for slides and hand-outs rather than use speaker's kits (5, 13.2% resources; 5, 12.2% hand-outs) (Tables A.6.1.48 and A.6.1.49, p. A-89).

Sixteen pharmacists (13.2%) participated in community development projects such as falls prevention, asthma and Wise use of Medicines, however only a total of 25 respondents (20.7%) answered this question (Table A.6.1.50, p. A-90).

Facilitators and Barriers to Health Promotion Participation

Four reasons as facilitators for participation were suggested by the survey, however being the facilitator of community service was an interesting unexpected response given by 9.1% (11) of respondents (Table 5.26) in this phase of the study. Respondents were able to mark more than one option in the section.

Table 5.26 Phase 3 Victorian Pharmacists 2003—Facilitators for Participation in Health Promotion Activities

Facilitator	Frequency	Percent.
Would like to do this	28	23.1
Someone asked me	45	37.2
Interest in the topic	24	19.8
Research	3	2.5
Community service	11	9.1

Respondents could mark more than one facilitator.

Percentage of total sample (121)

Barriers to participation were mainly related to time by 47.1% (57) of pharmacists who had either no time or time constraints restricting participation in health promotion activities. For a profession that speaks to the public frequently on a daily basis, 21.5% (26) of the respondents were not confident speaking publicly or lacked experience. Only two stated this was not the role of a pharmacist while 20 (16.5%) had never been approached (Table 5.27).

Table 5.27 Phase 3 Victorian Pharmacists 2003—Barriers to Participation in Health Promotion Activities

Barrier	Frequency	Percent.
No time or time constraints	57	47.1
Not a pharmacist's role	2	1.7
Never been approached	20	16.5
Lack of experience speaking publicly /confidence	26	21.5

Respondents could mark more than one barrier.

Percentage of total sample (121)

Opinions on Pharmacy Involvement

Although two-thirds of the respondents (53, 61.6%) would participate in health promotion activities if they were reimbursed for out of pockets expenses, the rest replied that this would not be an inducement (Table A.6.1.51, p. A-90). Potential charges for 16 respondents ranged from zero to a maximum of $250 noted by two pharmacists, however 68.8% (11) of respondents would charge $50 or less (Table A.6.1.52, p. A-90). Of 72 replies, 94.4% would not charge for community talks, as pharmacists wrote these groups often do not have the money for this type of expense.

Fifty-four respondents (94.7%) also would not charge for media participation (Table A.6.1.53, p. A-91).

Over half (57, 68%) the Victorian pharmacists who answered this question would consider participation in community events if their presentations skills could be improved and half (50, 50.5%) would be interested in a free workshop to develop their presentation skills, 68.7% (57) (Table A.6.1.54, p. A-91).

Table 5.28 Phase 3 Victorian Pharmacists 2003—Reasons Why Pharmacists Are Not Included in Health Promotion Projects

Reason	Frequency	Percent.
Lack of understanding of pharmacist's skills	66	54.5
Pharmacy has poor links with other organisations or services	42	34.7
Unmanageable time of requests	53	43.8

Respondents could mark more than one reason.

Percentage of total sample (121)

Half the pharmacists (66, 54.5%) surveyed do not think others know and understand about their levels of knowledge and skills. One-third (42, 34.7%) felt that pharmacy has poor links with other organisations and services. Unmanageable time of requests was an issue for 43.8% (53) of respondents (Table 5.28).

5.3 Comparison of Results

5.3.1 Comparison of Surveys: Phase 1 Tasmania 1999, Phase 2 Tasmania 2002 and Phase 1a Tasmanian Pharmacy Students 1999

Facilitators and barriers to health promotion participation were compared across the Tasmanian groups of pharmacists and students. These students would have been registered in 2002 when the second survey was conducted.

Table 5.29 Phases 1, 1a and 2—Comparison of Facilitators for Participation in Health Promotion Activities

	1999 TASMANIAN PHARMACISTS		1999 TASMANIAN STUDENTS		2002 TASMANIAN PHARMCISTS	
	Phase 1		Phase 1a		Phase 2	
Facilitator	**Frequency**	**Percent.**	**Frequency**	**Percent.**	**Frequency**	**Percent.**
Would like to do this	28	21.7	28	50.9	28	18.3
Someone asked me	46	35.7	20	36.4	66	43.1
Interest in the topic	28	21.7	31	56.4	28	18.3
Research	5	3.9	3	3	9	5.9
Community service	8	6.25	10	18.2	9	5.9
Total number of respondents	129		55		153	

Respondents could mark more than one facilitator.

Comparison of results showed although that half of the Tasmanian students and trainees would like to participate in the health promotion activities mentioned, only about 20% of Tasmanian pharmacists surveyed in both years felt the same way. Community service as a facilitator for participation was important to 18.2% of students compared to only 6% of qualified pharmacists. There was little change over time for all facilitators in the Tasmanian pharmacist populations surveyed for this study.

Table 5.30 Phases 1, 1a and 2—Comparison of Barriers to Participation in Health Promotion Activities

	1999 TASMANIAN PHARMACISTS		1999 TASMANIAN STUDENTS		2002 TASMANIAN PHARMCISTS	
	Phase 1		Phase 1a		Phase 2	
Barrier	**Frequency**	**Percent.**	**Frequency**	**Percent.**	**Frequency**	**Percent.**
No time	78	60.5	32	58.2	95	62.1
Not a pharmacist's role	0	0	1	1.8	2	1.3
Never been approached	28	21.7	23	41.8	33	21.6
Lack of experience speaking publicly /confidence	43	33.3	19	34.5	45	29.4
Total number of respondents	129		55		153	

Respondents could mark more than one barrier.

Lack of time or time constraints were the most important barriers to participation in the health promotion activities as shown in Table 5.30 above. However the second most common barrier, in a third of cases for all sectors, was lack of experience or lack of confidence in public speaking. About twenty percent of pharmacists had never been approached to participate in health promotion activities. Very few respondents thought these activities were not the role of a pharmacist. The barriers to participation did not change over time for the two Tasmanian populations surveyed.

Table 5.31 Phases 1, 1a and 2—Comparison of Reasons Why a Pharmacist is Not Approached to Participate in Health Promotion Projects

	1999 TASMANIAN PHARMACISTS		1999 TASMANIAN STUDENTS		2002 TASMANIAN PHARMCISTS	
	Phase 1		Phase 1a		Phase 2	
Reason	Frequency	Percent.	Frequency	Percent.	Frequency	Percent.
Lack of understanding of pharmacist's skills	89	69	45	81.8	108	70.6
Pharmacy has poor links with other organisations or services	53	41.1%	16	29.1	55	35.9
Unmanage-able time of requests	35	27.1	10	18.2	72	47.1
Total number of respondents	129		55		153	

Respondents could mark more than one reason.

These results strongly indicated that Tasmanian pharmacists and pharmacy students believe their knowledge and skills were not recognised by others. They also believe that the profession has poor links with other organisations. Unmanageable time of request contributed to pharmacists not being included in a range of health promotion projects. This factor was important to one-quarter of the respondents in 1999 but by 2002, nearly half thought this was a concern. This represents the only change over time in the two Tasmanian pharmacist surveys (Table 5.31).

5.3.2 Comparison of Surveys: Phase 2 Tasmania 2002 and Phase 3 Victoria 2003

The Phase 2 and Phase 3 groups were be compared further for participation in health promotion activities. For each group the median age was the same, however the mode of the Victorian group was in the 51–60 years band and for the Tasmanian group it was in the 41–50 years age band. In each case there were more female (55% Tasmania, 53.8% Victoria) respondents than male (46.2% Tasmania, 45% Victoria).

Both groups had approximately 80% of respondents in community practice (79.7% Tasmania, 71.9% Victoria). The Victorian sample had 83.7% respondent pharmacists in community practice if the respondents who were not working in pharmacy practice, were overseas, or whose questionnaires were returned were excluded from the sample.

Facilitators and barriers to health promotion participation were compared using results from surveys of Tasmanian and Victorian pharmacists.

Table 5.32 Phases 2 and 3—Comparison of Facilitators for Participation in Health Promotion Activities

	2002 TASMANIAN PHARMCISTS		2003 VICTORIAN PHARMACISTS	
	Phase 2		Phase 3	
Facilitator	**Frequency**	**Percent.**	**Frequency**	**Percent.**
Would like to do this	28	18.3	28	23.1
Someone asked me	66	43.1	45	37.2
Interest in the topic	28	18.3	24	19.8
Research	9	5.9	3	2.5
Community service	9	5.9	11	9.1
Total number of respondents	153		121	

Respondents could mark more than one facilitator.

Pharmacists in both survey groups mainly became involved with these activities because someone asked them to participate (Table 5.32). Both groups would like to participate, and interest in the topic and research were important factors. While almost 10% of Victorian pharmacists felt that community service was important, only 5.9% of Tasmanian pharmacists felt this way. Thus, pharmacists in both states noted similar reasons for participating in health promotion activities although Victorian pharmacists felt more strongly about community service.

Table 5.33 Phases 2 and 3—Comparison of Barriers to Participation in Health Promotion Activities

	2002 TASMANIAN PHARMCISTS		2003 VICTORIAN PHARMACISTS	
	Phase 2		Phase 3	
Barrier	**Frequency**	**Percent.**	**Frequency**	**Percent.**
No time or time constraints	95	62.1	57	47.1
Not a pharmacist's role	2	1.3	2	1.7
Never been approached	33	21.6	20	16.5
Lack of experience speaking publicly /confidence	45	29.4	26	21.5
Total number of respondents	153		121	

Respondents could mark more than one barrier.

The main barrier for both groups was time constraints. Sixty-two per cent of Tasmanian pharmacists and about half the Victorian pharmacists (Table 5.33) indicated this was their main barrier. Lack of experience and confidence in public speaking was important to one-third of Tasmanian pharmacists but to only 21.5% of Victorian pharmacists. A pharmacist not being approached for health promotion activities was also a barrier reported by both groups.

While 70.6% of Tasmanian pharmacists in 2002 believed that there was a lack of understanding of their skills, only half their Victorian colleagues shared this view (Table 5.34). About the same proportions from each state thought that the profession has poor links with other organisations, and unmanageable time requests hampered participation in health promotion activities.

Table 5.34 Phases 2 and 3—Reasons Why Pharmacists Are Not Included in Health Promotion Projects

	2002 TASMANIAN PHARMCISTS		2003 VICTORIAN PHARMACISTS	
	Phase 2		Phase 3	
Reason	**Frequency**	**Percent.**	**Frequency**	**Percent.**
Lack of understanding of pharmacist's skills	108	70.6	66	54.5
Pharmacy has poor links with other organisations or services	55	35.9	42	34.7
Unmanageable time of requests	72	47.1	53	43.8
Total number of respondents	153		121	

Respondents could mark more than one reason.

In Table 5.35, statistical tests comparing these two sets of data revealed some significant results. The data used for this analysis was the Phase 3 Victorian 2003 urban and rural samples, and the Phase 2 Tasmanian 2002 urban and rural samples, (reclassified as described in Table 5.15, p.150), which increased the rural component from 22.7% to 48.7%. In the Victorian 2003 sample, 55.4% of pharmacists identified themselves as working in a rural area. Using the two state samples, analysis of differences in urban and rural practice was investigated as well as differences in health promotion practice between states.

Tasmanian rural pharmacists in 2002 participated in significantly more community talks, however, their urban counterparts produced more newsletters but there was no significant result for media presentations. These same results for the Victorian pharmacists showed no statistical significance in any of these areas. Urban female Victorian pharmacists were significantly more likely to participate in health promotion activities but this was not a significant result for the Tasmanian pharmacist sample.

No significance difference between urban and rural pharmacists wanting to participate in the health promotion activities was suggested by the survey in either state. In Tasmania, significantly more urban pharmacists were not asked to participate so it appears that the rural pharmacists may be asked more frequently, as indicated by the fact that they give more talks as described in the previous paragraph. Interest in the topic was not a significant facilitator in either state for participation in health promotion activities. The numbers of pharmacists indicating community service as a facilitator to practice were too small to analyse in Tasmania and this result was not significant in Victoria.

Rural pharmacists had significantly less time available in the Tasmanian sample, however this barrier was not significant for the Victorian sample. Tasmanian urban pharmacists were not approached at a significant level but again, this was not significant for the Victorian pharmacists. In both samples rural pharmacists are significantly less confident and lacked the experience to present in public when compared with urban pharmacists.

Table 5.35 Phase 2 and 3—Chi^2 Analyses

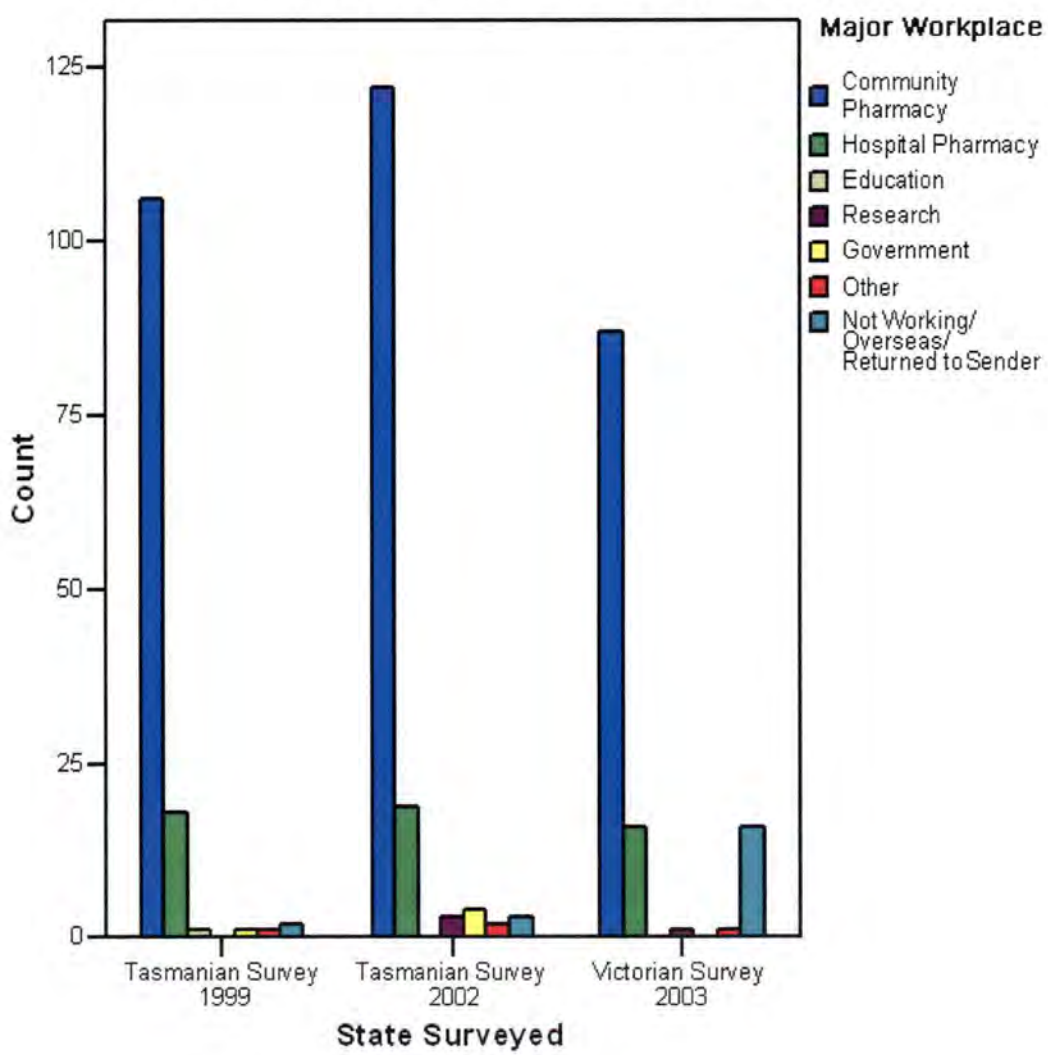
	Phase 2 Tasmania 2002	Phase 3 Victoria 2003
Community Talks	Chi^2 = 16.655 (p < .001) Rural significantly higher	Chi^2 = 3.139 (ns)
Newsletters	Chi^2 = 26.685 (p < .001) Urban significantly higher	Chi^2 = <1 (ns)
Media Presentations	Chi^2 = <1 (ns)	Chi^2 = <1 (ns)
Gender	Chi^2 = <1 (ns)	Chi^2 = 4.179 (p < .05) More urban women participate
Facilitators: Would like to do this	Chi^2 = 2.450 (ns)	Chi^2 = 2.240 (ns)
Facilitators: Someone asked me	Chi^2 = 11.668 (p < .001) Urban not asked	Chi^2 = 1.265 (ns)
Facilitators: Interest in the topic	Chi^2 = 2.143 (ns)	Chi^2 = <1
Facilitators: Community service	Numbers too small	Chi^2 = 1.680 (ns)
Barriers: No time or time constraints	Chi^2 = 4.329 (p < .05) Rural less time	Chi^2 = <1 (ns)
Barriers: Never been approached	Chi^2 = 4.715 (p < .05) Urban not asked	Chi^2 = <1 (ns)
Barriers: Lack of confidence and Experience Speaking in Public	Chi^2 = 6.972 (p < .01) Rural less confident	Chi^2 = 4.406 (p < .05) Rural less confident
Total Number of respondents	**153**	**121**

Therefore, this research reveals that Tasmanian rural pharmacists did participate in community talks more than urban pharmacists. In urban areas, Victorian female pharmacists were more likely to participate in health promotion activities. Tasmanian rural pharmacists cited less time but still contributed to community talks. Both samples analysed indicated lack of confidence or lack of experience was an issue for presentations and activities suggested by this study.

5.3.3 All Pharmacist Surveys

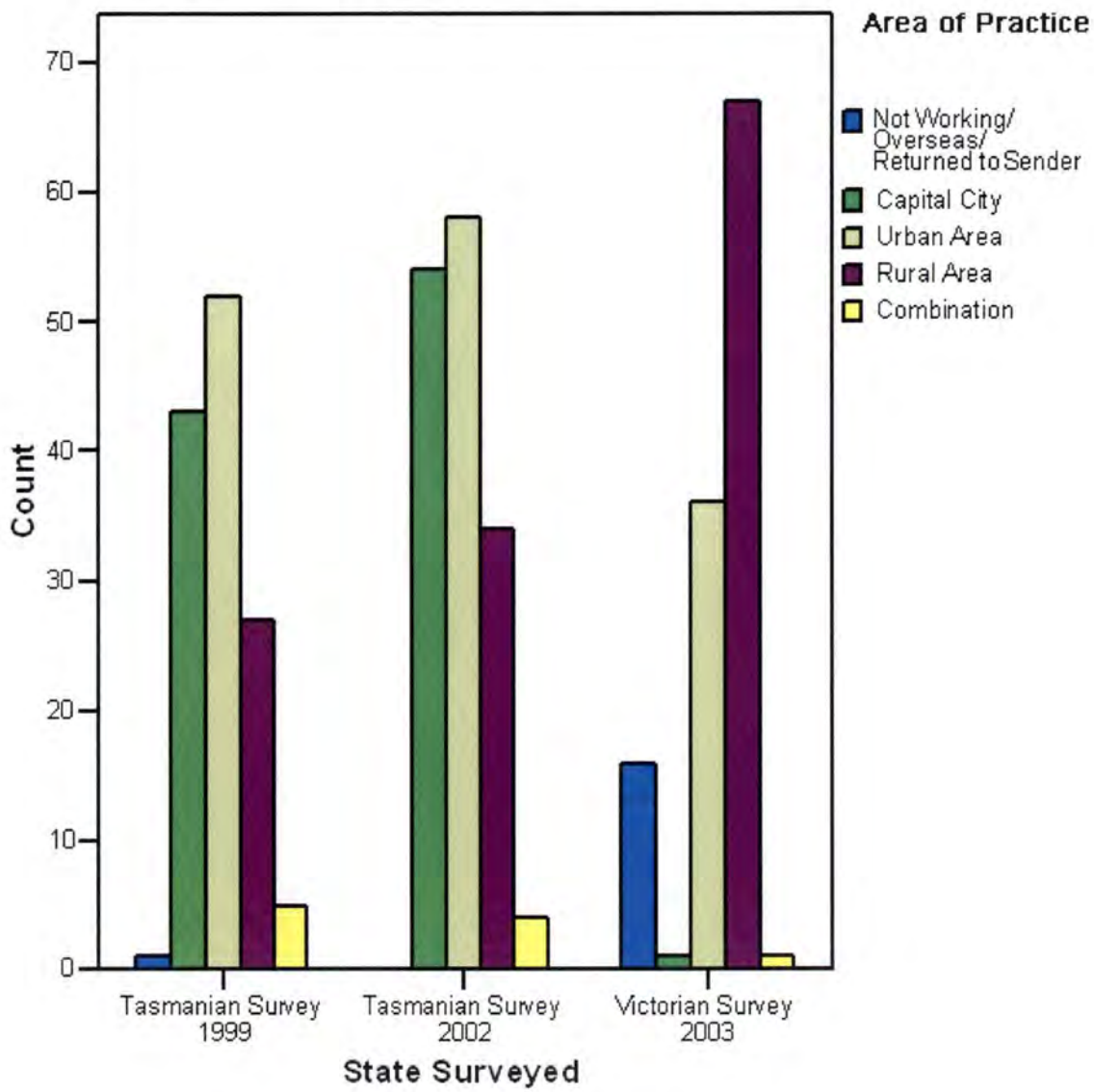
Comparisons can also be made across individual surveys. As Tasmanian pharmacists were surveyed twice, only certain phase results can be analysed in some tables. When comparing all data, the age of respondents is similar to that of the national averages. Pharmacists are able to remain registered despite not working or being retired as indicated in the Victorian sample. Figure 5.1 shows clearly the differences in practice, however the majority of respondents in all surveys were in community practice.

Figure 5.1 Phases 1, 2 and 3—All Pharmacist Surveys—Major Workplace



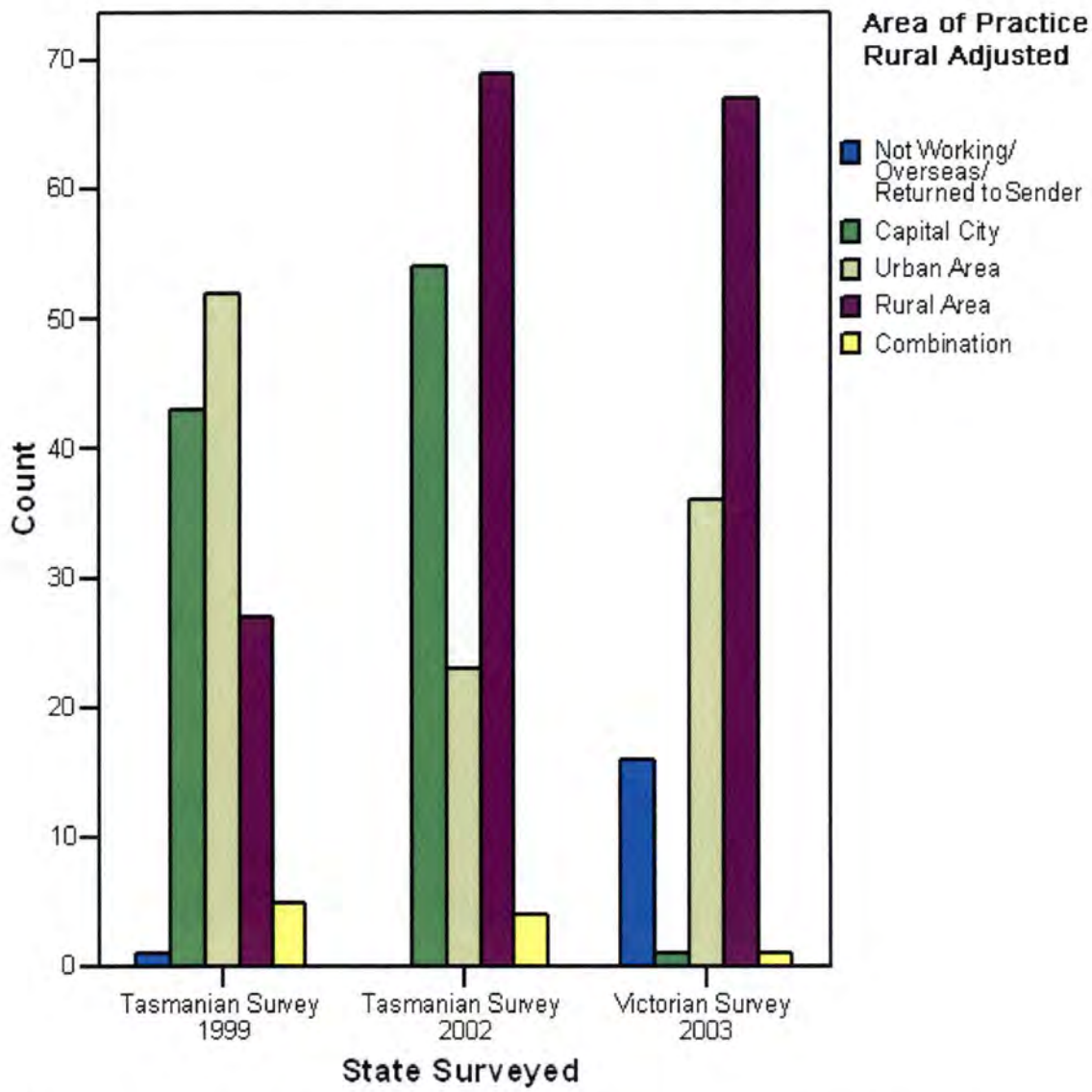
Using the base data, more pharmacists in Victoria considered their area of practice to be rural than do those in Tasmania (Figure 5.2). The suggested reason is pharmacist perception of the term 'rural'. Locally, pharmacists in Tasmania may not consider themselves rural if they work in the northern cities of Launceston, Devonport or Burnie, as previously discussed. Respondents in Victoria may be more aware of the PhARIA classifications, than in Tasmania, and thus marked their questionnaires accordingly.

Figure 5.2 Phases 1, 2 and 3—All Pharmacist Surveys—Area of Practice



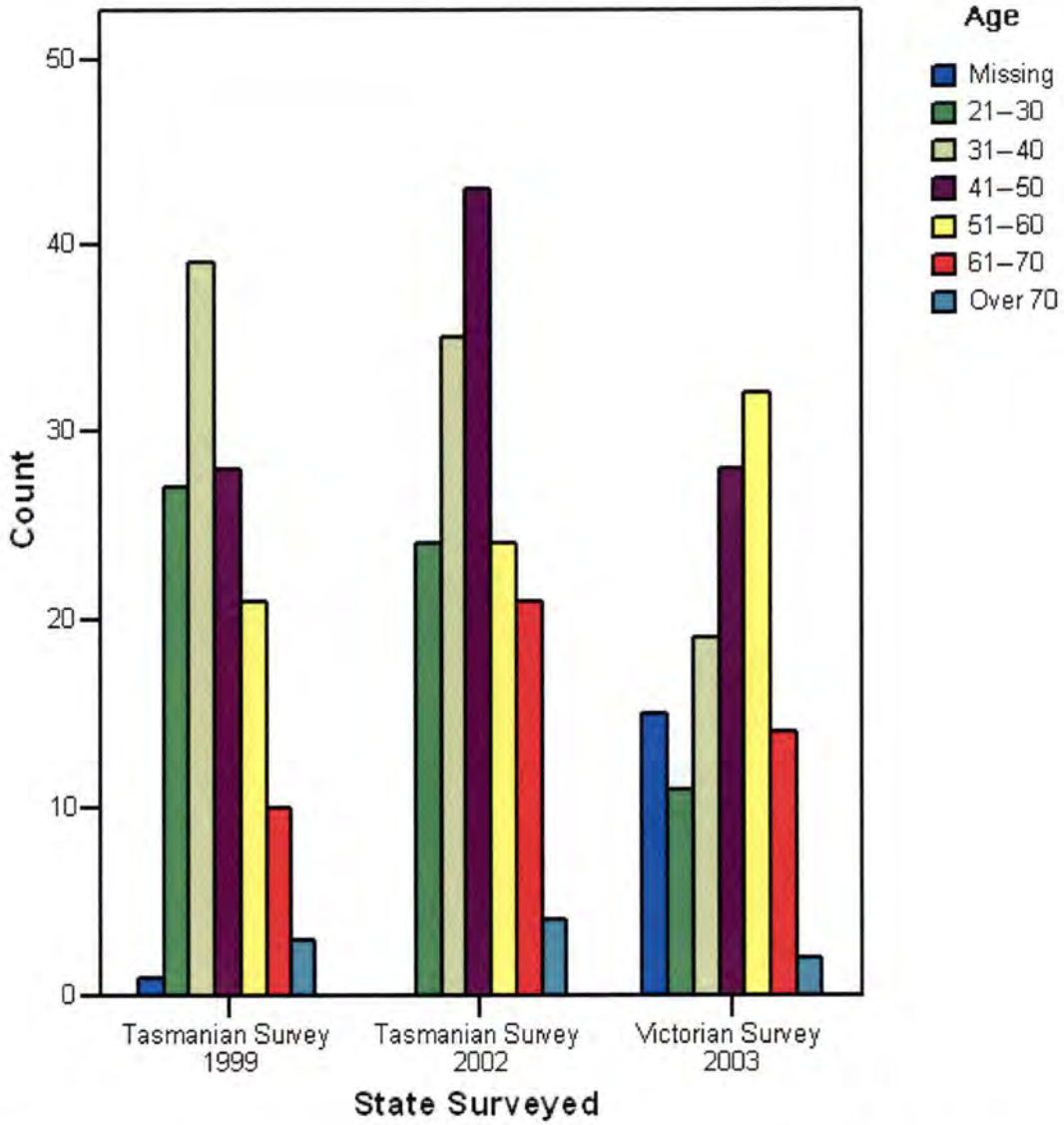
When the Tasmanian 2002 data was adjusted by transforming all postcodes above 7055 to rural which would comply with the PhARIA rural classification structures, the proportions of rural pharmacists doubled as shown in Figure 5.3.

Figure 5.3 Phases 1, 2 and 3—All Pharmacist Surveys—Area of Practice–Adjusted



As shown in Figure 5.4, the age range differs for pharmacist respondents between states, however despite differences in mode groups, the median age is the same. The spread of age within the respondent groups appears different for each survey.

Figure 5.4 Phases 1, 2 and 3—All Pharmacist Surveys—Age



Using cross-tabulation data, pharmacists in rural areas appeared more likely to participate in community talks as more have participated in community talks than not as can be seen in all surveys (Table A.6.1.55, pp. A-92–93). However, this was not the case for newsletters or media. These data were not split into those who listed their major workplace as community or hospital.

From Table A.6.1.56, pp. A-93–94, it can be seen that paid hours of work did not appear to affect pharmacist participation in community talks or newsletters or media participation. Except for those over 60, age did not appear to affect whether or not a

pharmacist, will participate in community talks, however most were not willing to write newsletters or participate in media productions (Table A.6.1.57, pp. A-95–96).

5.3.4 Qualitative Analysis

In comments section of the Pharmacist Questionnaire, Question 28, pharmacists were asked to nominate reasons why a pharmacist was not included in health promotion activities suggested by the survey. Pharmacists nominated time, lack of available locum staff and work pressures as the major reasons for this lack of participation by the profession. Lack of confidence or experience speaking publicly did emerge as an issue in qualitative comments, although one respondent said it was hard to adapt to a lay audience. However, respondents also acknowledged that the profession should be involved in these activities, and that pharmacists may have to change their image as the busy health professionals who are unavailable and consequently not asked to participate. Pharmacists did comment that the profession should find time and participate in the community activities suggested by the survey.

The following comments were offered in responses from the Phase 1 Tasmanian Pharmacists 1999 survey:

- *'We have not promoted ourselves....'*
- *'Pharmacists don't have a high public profile—everybody has heard of Rob Walters* (General Practitioner) *or Neroli Ellis* (Nurse) *but nobody would be able to name a well-known pharmacist. We probably have a different image to other health professionals because we work in "shops"* '

- *'Apathy amongst the profession; lack of confidence–communication skills have traditionally been neglected in undergrad courses'*
- *'Expectation of receiving medication in "5 minutes" limits the influence of pharmacists.'*
- *'Great way for pharmacy promotion, BUT it takes time (and money) and we need resources (and some pharmacists do not have the confidence to do this type of work).'*
- *'In this information age pharmacists must be pro-active in promoting their knowledge and expertise as this role is being usurped by nurses and quasi-health "professionals" such as complementary/alternative therapy.'*
- *'The only thing that would prevent me is time, but it is ESSENTIAL to find time'*

In Phase 2 Tasmanian Pharmacists 2002, the same themes emerged:

- *'If PSA or guild were to form a group of available speakers and offer these to community groups they would be snapped up. Essential to provide the necessary materials as most of us lack the expertise to prepare a PowerPoint presentation.'*
- *'I suppose if you are organising a public health promotion and you want experts in that particular area, if it's drugs you'd probably think 'pharmacist'. But if it's diabetes or asthma etc, you would probably think that a doctor, or nurse who works specifically in that area, would know more than a pharmacist. And you'd probably be right. It's only if you're going for the holistic, team approach that you'd include a pharmacist.'*
- *'I feel that all the types of activities mentioned are an area that pharmacists are not utilising, because community groups don't realise they are interested. This is my personal experience.'*

- *'We almost subconsciously create this image that we are 'busy people' so people are assuming we won't have time—which is sometimes true given during business hours is almost impossible to manage.'*
- *'The enormous and growing bureaucratic load on pharmacists as well as increasing commitments required to stay in business contribute to pharmacist's focus being diverted from the actual job of pharmacy. This situation is becoming increasingly worse!'*

However there were comments to indicate the cost impost of this activity:

- *'As the owner of a small pharmacy it is virtually impossible to establish links with other services and provide community based presentations without it being a major financial (eg locum costs) drain apart from the time limitations and planning required (eg locum availability when needed).'*

Phase 3 Victorian Pharmacists 2003 commented similarly:

- *'General pharmacy organisations represent us in the media absent in this task or do not put point of view across reinforcing labels on bottles'*
- *'Interestingly GPs are paid on a level of reimbursement equiv to that they give up to participate'*
- *'Community education is a good idea but pharmacists work extremely long, tiring hours'*
- *'Most expected to donate time, not convenient >50 hrs/week and CPE/QCP and lifestyle. Especially not paid business or group'* (CPE Continuing Professional Education, QCP Quality Care Program (QCPP))
- *'If pharmacist can find time, is enthusiastic—good value for the community.'*

- *'Work short staffed— would enjoy doing more public speaking. HP professionally satisfying bugger to prepare, difficult to talk down to audience.'*
- *'I think that pharmacists can be on occasion be rather insular, which is not necessarily their fault, but just a consequence of increased workload and staffing constraints. I think that when a pharmacist gets involved their skills are recognised. We are involved locally but usually ad hoc approaches to individual pharmacists rather than a conscious campaign to become involved in this sort of thing within the community.'*
- *'They have contact with the public and are highly regarded by them and their input could easily be utilized.'*
- *'I think it is great for a pharmacist to help explain health issues to the public. For me, I really don't enjoy or feel comfortable giving talks to large groups – I don't particularly wish to take this activity to a greater extent than my 4 talks per year and writing in the school newsletters each term.'*
- *'This survey is skewed towards community pharmacists, therefore a waste of time. I am proud to be a well respected clinical pharmacist. I educate my patients about new medications or I give talks to nursing staff re medications. I attend and am part of an infectious diseases ward round with a consultant + registrar and we regularly update one anothers thought about medications. Your time limit of two years will skew your results, additionally. I have previously spoken at women's health forum expo, Parkinson's support group all as a hospital pharmacist, in the past 5 years.'*
- *'With a long standing shortage of pharmacists it is virtually impossible to keep up with care demands of community pharmacy let alone take on new responsibilities.'*

- *'To really provide a worthwhile service more than one pharmacist per pharmacy is needed, so that a pharmacist can venture outside the safe 4 walls of the pharmacy. The 4 wall syndrome prevents many pharmacists from thinking laterally to extend their expertise into the health field in the community.'*
- *'As a single pharmacist business there is no time or opportunity to do such things during normal opening hours.'*
- *'As a group we are perceived to be unavailable during normal working hours for meetings/lectures etc. and working groups.'*

The comments reflect an 'insular' profession and one that operates within '4 walls'. Respondents stated that pharmacists needed to be proactive and promote the profession through these activities. Some were concerned that other professions would usurp the role of a pharmacist in health promotion activities. However, despite work pressures, pharmacists appeared to support involvement in health promotion activities.

5.4 Summary

Results of demographic factors, participation in health promotion activities, facilitators and barriers to health promotion activities, and opinions on pharmacy involvement were analysed using SPSS 12.1 © for the four phases of this study. This allowed for results from these individual areas and a comparison over time between the two Tasmanian surveys in 1999 and 2002, and for 1999, a comparison with student expectations and current practice. Comparison of Tasmanian practice in

2002 and Victorian practice in 2003 investigated differences between the two groups of pharmacists.

The results of this study gave the following details of the pharmacist, pharmacy students and pharmacy trainee respondents. Respondents corresponded to the Australian average figures for age, gender, work location and type of work undertaken allowing use for analysis and comparison with examples of other pharmacy practice data found in the literature.

Many respondents had participated in the suggested community health promotion activities of community talks, newsletters and media presentations. Approximately half had given community talks, but the great majority of these had given only one or two over the past two years, the time-frame specified by the study. Fewer wrote newsletters and only a few participated in media presentations in this time period. Respondents appeared to use their own resources for these activities. Relatively few pharmacists participated in community development activities and only annotated questionnaires with the suggestions given as examples.

Facilitators for pharmacists in health promotion activities were mainly those listed in the questionnaire. Many would like to participate and did so because they were asked. A sense of giving back to the community and promotion of the profession were unexpected reasons recorded by all respondent groups. Students cited this reason more than did registered pharmacists.

Lack of time or time constraints was the main barrier for two-thirds of Tasmanian respondents but for only half the Victorian pharmacists. Lack of confidence and

experience in speaking publicly was also a major barrier in all phases of the surveys undertaken for up to one-third of respondents. Many pharmacists had not been asked to participate in the activities mentioned in the questionnaires.

Payment was an issue for some, and if payment were forthcoming, respondents would consider participating in health promotion activities however the great majority of pharmacists and students would give their time freely for community or media presentations. Many pharmacists would participate if their presentation skills could be improved and were also interested in free presentation skills workshops.

Many pharmacists believe that the profession was left out of community activities and not included on various local groups and committees. When asked to consider the reasons why the profession was left out of a range of health promotion activities, only half the Victorian pharmacists felt that others did not appreciate the extent of their knowledge, compared to 70% of their Tasmanian colleagues. About one-third felt that the profession had poor links with other organisations and services. Unmanageable time of requests was an issue for 40% of Tasmanian pharmacists in 2002 but only 27% in 1999. Nearly half the Victorian pharmacists felt unmanageable time of requests was an issue for them. This would indicate that pharmacists were not represented locally in health activities and that the community did not consider asking a pharmacist for participation in local activities outside the pharmacy itself.

For the Phase 2 Tasmania 2002 study, results were adjusted, allowing relocation of those who had identified as urban, but could be considered rural if classification structures such as the PhARIA system were used. Recoding doubled the rural

component of this sample and allowed for further analysis and comparison with the Phase 3 Victoria 2003 respondents. Using these results, in this study, pharmacists who engage in community activities were not restricted by age, location or hours of work. Tasmanian pharmacists in rural areas were more likely to participate in health promotion activities such as community talks, while more urban pharmacists wrote newsletters. Victorian female pharmacists were more likely to participate in health promotion activities but this was not significant for Tasmanian pharmacists. Pharmacists were not asked to participate in health promotion activities in urban areas of Tasmania. Rural Tasmanian pharmacists cited time as a significant barrier but still participate in health promotion activities. Lack of confidence or lack of experience was a significant issue for rural pharmacists in both samples. These results do indicate that rural pharmacists participated in health promotion activities despite the barriers identified by this study.

Pharmacists were allowed space for comments after several sections of the questionnaire and for additional comments at the end. The qualitative results revealed that the respondents thought there was a lack of time for or willingness of pharmacists to think laterally and move beyond the comfortable '4 walls' of the pharmacy. Recognition of the profession, as one that not only dispenses prescriptions but can also give healthy living advice, was important to other respondents. Some comments suggested that this was an area for pharmacy to consider, but work constraints including that of staff shortages, prevented this participation at the present time. However, others suggested that the profession should participate in these activities, despite the barriers, instead of the ad hoc approaches that now exist.

The results, both quantitative and qualitative, of the four questionnaires of Tasmanian and Victorian pharmacists, conducted over a four-year time-frame, will be discussed in the next chapter together with the consequent recommendations and conclusions that can be drawn from this study.

Chapter 6: Discussion and Conclusions

6.1 Overview

The last chapter of this thesis will bring the knowledge gained from the literature of health promotion in health care, pharmacists' knowledge and interpretation of health promotion, examples of participation by pharmacists, and educational opportunities for both students and graduates together with the results of this study. From these data, recommendations and conclusions will be drawn.

The scarcity of literature about participation in health promotion by pharmacists, confusion regarding terminology, partial interpretation of the term 'health promotion', and the profession's professional standards all tend to give rise to the notion of health promotion as an additional activity. The paucity of relevant literature in the study area considered for this thesis highlighted the lack of published data to indicate pharmacists' actual involvement in health promotion activities. Confusion over terminology in the pharmacy health promotion literature suggests that the profession probably has difficulty deciding and reflecting upon their participation in health promotion activities, when they occur. The review of the literature also showed that the pharmacy profession in Australia seems to have actively interpreted only part of the definition of health promotion in the *Ottawa Charter* (WHO 1986). Further, the pharmacy *Professional Practice Standards* (PSA 2002) define health promotion as a separate standard, thus making it an additional activity, not a basis for practice.

The demographic data from this study indicated the pharmacist respondents to be similar in profile to pharmacists in other published Australian literature (AIHW 2003; HCI 2003), but comparative studies between rural and metropolitan pharmacists in this area of pharmacy practice were not found. Results from survey data will be discussed and comparisons made between practice over time in Tasmania, as well as practice differences between Tasmania and Victoria, in both rural and urban areas. As participation in health promotion activities may require a change in practice, the barriers and facilitators to participation in health promotion activities, found in this study will be compared to others found in the literature. This study highlighted significant differences in health promotion activities in some areas of rural and urban pharmacy not previously discovered in the literature.

Education curriculum content for health promotion for undergraduate pharmacy students is discussed using the results of the student survey data to show the potential practice expectations of future pharmacists. The lack of postgraduate education opportunities in the area of health promotion practice for practising pharmacists in Australia, is recognised and suggestions are made to update and change the current distance learning modules, provided by the Australian College of Pharmacy Practice (ACPP 2003), now known as the *Australian College of Pharmacy Practice & Management* (APC). Health promotion educational opportunities should include both a range of theories and practice examples, for undergraduate students and pharmacists in metropolitan and rural practice. After all, 'Health promotion needs to become "a way of thinking and working" rather than an "add-on" activity' (Anderson 1998; Blenkinsopp et al. 2000, p. 95) and 'A poster in the window is not Health Promotion' (Duncan 2002).

Five recommendations have emerged from this study. These recommendations suggest both a change in practice and in course structures is needed with implications for the pharmacy workforce, especially for those in rural areas.

6.2 Identification of and Reflection on Key Issues

Three key issues have emerged from this study: Firstly, pharmacist knowledge of health promotion; secondly pharmacist participation in health promotion activities with differences in rural pharmacy practice; and thirdly, pharmacy student training in health promotion for both undergraduates and postgraduates. Each of these themes will be discussed using the knowledge gained from the literature and the results of the study itself. A series of recommendations is presented as a result of reflection on these key issues.

6.2.1 Pharmacist Knowledge of Health Promotion

Most pharmacy practice literature uses but does not define the term 'health promotion'. In Australia, both *Professional Practice Standards* (PSA 2002) and *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b) use the definitions provided by the *Ottawa Charter* (WHO 1986). Without the use of specific examples to show the pharmacy profession how it can contribute and practice across all aspects of the charter, these definitions are of little value.

Confusion with terminology in the pharmacy literature, with interchangeable use of the terms, 'health promotion', 'health education', 'primary health care', 'public

health' and 'preventative health' for similar activities continues to bewilder the profession both in Australia and overseas. Specific examples of terminology exchanges and lack of acknowledgement of health promotion theory in the pharmacy practice literature has led to a recommendation to change the pharmaceutical professional practice standards concerned with health promotion activities.

Literature Definitions

Lack of useful definition, changing terminology and confusion about the nature of health promotion in the literature confronts the pharmacy profession when considering this as a method of practice or way of working. Apart from one currently available British text by Blenkinsopp et al. (2000), *Health Promotion for Pharmacists*, the definition of health promotion for the pharmacy profession is provided by the *Professional Practice Standards* (PSA 2002) and the *Competency Standards for Pharmacists in Australia 2003* (PSA 2003b). Lack of consistency in these documents and the changing terminology of health promotion, continues to confuse members of the profession.

Blenkinsopp et al. (2000) from Great Britain describe health promotion in pharmacies as a 'way of thinking and working' in which pharmacists should negotiate rather than tell their customers what to do (pp. 94–95) using the pharmacist's role in counselling, information supply and a potential future role in local health trust planning groups (pp. 92–93). These activities were suggested by the authors as challenges for pharmacist health promotion practice in Great Britain. In this text, the definitions using the *Ottawa Charter* and limited use of various models of health promotion do give some direction for the profession. However in Australia, most of these activities, except for a role in health trust groups, would be

normal pharmacy practice, but they are usually not combined under the banner of health promotion practice.

In Australia, the pharmacy *Professional Practice Standards* (PSA 2002) define health promotion using the words provided by the *Ottawa Charter* (WHO 1986). The first set of the PSA's *Professional Practice Standards* did not become available until after this study began in 1998 and the second edition was published in 2002. The addition of quality improvement evaluation outcomes was the only significant change in the second edition. These were added for the QCPP (PGA 2001) Pharmacy Guild of Australia quality assurance program (Appendix 2.2, p. A-7). No other significant changes were made to the wording of the standard itself or any other part of the standard document. The influence of these standards on pharmacy practice in health promotion is doubtful as pharmacists can comply with the criteria of this standard without participation in health promotion activities, particularly those outside the pharmacy itself.

The introduction in the first standard defines 'health promotion' in several different ways without specific reference to pharmacy practice. The standard statement itself, affirms pharmacists' role to 'promote health', by information provision on health conditions and their management to individuals and the community (PSA 2002) (Appendix 2.1, p. A-3). The action areas of the *Ottawa Charter* and the *Jakarta Declaration* (WHO 1997a) are included as additional information for this standard without explanation as to their applicability to pharmacy practice. Without an understanding of basic health promotion theory the reader will not be able to link the Charter activities with this pharmacy practice standard and therefore understand that many normal pharmacy activities are facets of health promotion in day-to-day

practice. The standard defines health promotion, as information that may, or may not, be given at the time of medication (PSA 2002). Also the standard often substitutes the words 'health education' for 'health promotion' despite specific definition provided by the WHO in 1998 (WHO 1998a) published prior to this first version. Despite the range of actions alluded to in the introduction, the giving of information by the pharmacist and pharmacy staff is the end result of health promotion activities recommended by this first standard.

Many other standards such as those on needle and syringe exchange, smoking cessation and methadone maintenance include 'health promotion' as information provision, but other standards which could be considered as health promotion, such as those relating to blood pressure, blood glucose and blood cholesterol monitoring, do not use the words, 'health promotion' at all nor the range of accompanying principles consequently available. The term 'health promotion', when used, is often interpreted as 'promoting health', using the basic dictionary meanings of these words. Although the first standard in the pharmacy *Professional Practice Standards* is on health promotion, it and other standards use 'health promotion' to mean information provision or to indicate that 'information on health promotion' be available in the pharmacy. Some standards do not even mention health promotion or some merely imply that health promotion is 'information on nutrition or health' only. Health promotion in these current professional standards is seen as an additional service, not a way of working.

The *Competency Standards for Pharmacists in Australia in 2003* (PSA 2003b) defined health promotion in the glossary. These documents do not include further reference to the scope of practice provided by this definition. Some aspects of

practice, as defined by the *Ottawa Charter*, are suggested only as optional activities usually undertaken by specifically trained pharmacists. Within this document, examples include the community development activities of planning and implementation of public education and awareness-raising health campaigns with other health professionals (p. 106), and networking with health professionals and identifying the health promotion needs in the community (p. 41). Some references to presentation and communication skills with groups were introduced in the exposure draft (PSA 2003a) but were removed from the final document, and only included as supplementary performance criteria in a diluted form (PSA 2003b, p. 41). These standards define these health promotion actions as additional activities that are not considered as core pharmacy practice. This study found although that pharmacists identified gaps such as poor links with other health groups and organisations and provided examples where a pharmacist should be included it also found that few pharmacists participated in community development activities at all.

The terminology within the pharmacy literature further adds to confusion for the pharmacist. In one example, 'health promotion' is not used at all (Nisbet-Smith & Emmerton 2004). This pharmacy-based programme for improving heart health and physical activity is clearly a health promotion programme. Using the definition of the *Ottawa Charter*, this programme encouraged people to take control of their own health. In another example, the title of an article uses the words 'health promotion', but the content described a staff education programme to conduct cardiac health activities in the pharmacy using the words 'health promotion' and the 'Behaviour Change Model' (Hourihan et al. 2003). However, it is not clear what specific health promotion theory was included or if any other models for behaviour change or health promotion are explored in this cardiovascular health programme, or whether health

promotion was interpreted in this project as only 'promoting health', using healthy lifestyle advice and information.

The 1995 report, *Information Needs for Health Promotion in Primary Health Care* (Commonwealth Department of Human Services and Health 1995) stated that pharmacists are not aware of health promotion resources such as HealthWiz, HEAPS or a Social Health Atlas and fewer than 35% of respondents consider themselves as being involved in health promotion. This indicated to the authors, that pharmacists do less health promotion than any other health professional. It appeared in the report that pharmacists were required to nominate which aspects of the *Ottawa Charter* were reflected in their practice. This report was conducted prior to the pharmaceutical professional standards and competency standards being released. Without any explanation or guidance and the use of relevant pharmacy-specific examples, pharmacists unfamiliar with health promotion terminology would underestimate their services, thus adding to the confusion over health promotion participation by the profession.

In addition, health promotion language within the pharmacy literature has changed over time. But unfortunately, several terms were used for the same activity. Selection of and advice to a customer purchasing a smoking cessation product can be defined as 'health promotion', 'health education', 'primary health care' and 'public health' depending on the reference cited. In Australia, the *National Pharmacy Database Project* (Berbatis et al. 2003) called this activity of assistance regarding, and potential sale of a product, 'Primary Health Care'. However, Berbatis et al. also called 'Smoking Cessation' within a pharmacy, entailing a service over and above routine practice, one of the 'Enhanced Pharmacy Services'. These same 'Enhanced

Pharmacy Services' are called 'public health' (Anderson et al. 2003; Bellingham 2004; Jones et al. 2004), and 'health promotion' (Adcock 2004b; Andalo 2004; Anderson 1996; Lumb 2004; Pike 2004a, 2004b) in Great Britain with the term 'preventative health' used in the United States (Kotecki et al. 2000). An inability to differentiate these jumbled expressions prevents pharmacists from making informed choices when considering altering practice, to those practices which would allow a broader range of health promotion activities, within or outside the pharmacy.

Other professions use the traditional interpretations of health promotion terminology as defined by the WHO (WHO 1998a). The traditional definition of 'primary health care' is the 'first contact with the health system'. An example of this provided by the *National Pharmacy Database Project* is that the term 'primary health care' was used here to describe activities such as 'pharmacy only' and 'pharmacist only' medications supply and sales, Consumer Medication Information (CMI) leaflets and referral to other health professionals including General Practitioners. Although the *National Pharmacy Database Project* has attempted to describe pharmacy activities using examples of 'Primary Health Care' and also 'Enhanced Pharmacy Services', the definitions used lock the pharmacist into associating the activities described with the specific examples given. For others not familiar with these terms, these examples of pharmacy practice are simply health education. Again, this confusion highlights the difficulties and consequent barriers pharmacists may encounter when talking to other health professionals about 'health promotion', 'primary health care', or 'public health'.

Health promotion as a concept has only recently been taught in pharmacy schools and by professional organisations, universities and colleges for pharmacy graduates.

As the respondents in this survey were the average age of a practising pharmacist (late forties), the concept of health promotion theory would not have been taught when they were undergraduates. As students, these pharmacists would have been taught about public health issues and preventative health information provision, the 'health promotion' described by Catford (2004) as that of the 1970s. Postgraduate opportunities appear not to be taken up by many pharmacists so any transformation in health promotion practice over the past decades and knowledge of current theory would be unknown to many pharmacy practitioners today.

Consequently, this study did not use the words 'health promotion', except in the title of the questionnaires because at the time it was felt that pharmacists would not have an understanding of the scope provided by the health promotion practice. The pharmacy literature compounds this lack of understanding and terminology confusion, even to the present day. It was assumed in this study, as there was no professional standard on health promotion at the start of the project, that asking pharmacists about their understanding and knowledge of health promotion theory would not encourage participation or add to this research.

In some pharmacy literature 'traditional' definitions using the *Ottawa Charter* were given with no specific explanation to allow pharmacists to equate these terms to current practice. In other examples, no definitions are given, or the term 'health promotion' is not mentioned at all. Terminology confusion limits the extensive range of opportunities available in health promotion practice, thus restricting participation by today's pharmacy practitioner.

International Perceptions of Health Promotion in Pharmacy Practice

In Canada and some parts of Great Britain, health promotion is part of the pharmacy culture although not on a widespread basis. But in the United States some studies revealed that health promotion is not as important as 'preventative health' (Kotecki et al. 2000). This ambiguity in terminology again contributes to a lack of understanding by the profession of the range of activities that can be provided by health promotion practice. However, although many pharmacists may see a role in health promotion or preventative health, some still do not consider this to be the primary role of the pharmacist.

The term 'public health' is beginning to appear in the literature in Great Britain to describe activities that have previously used the term 'health promotion'. The review of the international literature found that both terms appear to relate to in-pharmacy activities such as privacy in a pharmacy, information access and programmes such as smoking cessation, heart health or weight reduction. For the past 15 years in the British literature, these same activities have been called 'health promotion'. 'Public health' is defined as a societal education whereas 'health promotion' is defined as relating to the individual (Anderson et al. 2003; Jones et al. 2004; Jesson 2002). Public health is further defined by Jones et al. (2004) as the three domains of health protection and disease prevention, health and social care, and health improvement. Examples given for pharmacy include counselling of medicines and lifestyle. These examples are also described as health promotion. However the *Ottawa Charter* for health promotion does not restrict its action areas to individual change, but some researchers assume this difference in definition to differentiate the profession's contribution to health.

Reflection, Conclusions and Recommendations

This study did not ask the questionnaire respondents to give their interpretation of the practice of health promotion. It used specific examples to encourage the respondent to consider activities undertaken as health promotion practice. As can be seen from the report, *Information Needs for Health Promotion in Primary Health Care* (Commonwealth Department of Human Services and Health 1995), pharmacists recorded the lowest contribution in health promotion of any health professional; but without provision of an explanation and examples specific to the profession, this will always be the case. Other surveys give specific examples for the profession to follow (Berbatis et al. 2003; Paluck et al. 1994; Scavone 1997) but do not ask respondents to interpret the concepts of health promotion or other models of health.

The *Professional Practice Standards* and the *Quality Care Pharmacy Program* (QCPP) affirm health promotion as an additional activity of information provision. This standard on health promotion refers the reader to other standards but there is no cross-reference back to the health promotion standard itself. All other professional practice standards relate to specific activities within the pharmacy itself. Many, if not all, are examples of health promotion. Health promotion is the platform upon which many of the other standards can connect. Health promotion is a way of practice, not a specific activity. Instead of it being an additional pursuit, health promotion concepts should be incorporated into all other standards.

Terminology ambiguity and confusion adds to the problems experienced by the profession in deciding whether activities undertaken are indeed health promotion. Although the *Ottawa Charter*, the *Jakarta Declaration* and the Stages of Change Model are referred to in the examples provided in the pharmacy literature, an

explanation and further use of the many available models of health promotion available to clarify health changes and improvements by both individuals and the community, are not. Transposition of many of the terms concerning health promotion therefore confirm its status as an add-on activity by the profession.

To change opinion of the practice of health promotion as a series of additional activities, it is recommended that the profession consider deleting the 'Health Promotion' Professional Practice Standard and define and incorporate the principles of health promotion in all standards. An explanation of health promotion as a way of practice should be included in the introduction of this standards document.

6.2.2 Pharmacist Participation in Health Promotion

In this study, the demographic data of the surveyed respondents indicated that they were similar to other pharmacists in Australia (AIHW 2003), and that therefore, conclusions can be drawn from the results. The low return rate of questionnaires in this study may be attributed to not following-up with an additional mail-out of the questionnaire, as well as the questionnaire's length and complexity. Other researchers in the literature (Barclay et al. 2002; Edwards et al. 2002; Jesson and Pocock 2001; Smith 2002) confirm these as reasons contributing to a low rate of survey returns. However, anonymity of the surveys did allow for frank answers to some questions, with the addition of personal opinions of professional practice. It can also be assumed, as not all pharmacists undertook the activities described in the questionnaire, that the respondents for this survey represent the proportion of pharmacists who do participate in health promotion activities of this nature.

Therefore, those who did not respond possibly did not participate in the health promotion activities as described in the questionnaires.

Pharmacist Contributions

Overall, pharmacists contributed to only a few health promotion activities of the type described in these surveys. About forty per cent of the Tasmanian and Victorian pharmacist respondents conducted community talks in the two years preceding the surveys (Tasmania 1999, 47/129, 37%; Tasmania 2002, 64/153, 42.4%; Victoria 2003, 49/106, 46.2%). However, despite this proportion, about three-quarters of these respondents gave only one to three community talks within this timeframe (Tasmania 1999, 34/46, 73.9%; Tasmania 2002, 56/64, 87.5%; Victoria 2003, 36/48, 75%).

Only about 20% of the respondents contributed to newsletters (Tasmania 1999, 29/116, 25%; Tasmania 2002, 23/139, 16.5%; Victoria 2003, 23/98, 23.5%). This contribution constituted only one or two publications in two years (Tasmania 1999, 16/25, 64%; Tasmania 2002, 17/23, 73.9%; Victoria 2003, 12/16, 75%).

Even fewer respondents (about 5%), participated in media events (Tasmania 1999, 13/124, 10.5%; Tasmania 2002, 5/146, 3.4%; Victoria 2003, 10/95, 9.5%). While most Tasmanian respondents participated on only one to three occasions (Tasmania 1999, 8/12, 66.7%; Tasmania 2002, 4/5, 80%), most Victoria respondents participated once or twice (Victoria 2003, 7/8, 87.5%).

Considering the exposure of health issues in community forums, magazines and the media, the overall contribution by the pharmacy profession is not great. The

Australian literature reviewed indicated that pharmacists gave community talks without defining the quantity or time-frame (Berbatis et al. 2003; Commonwealth Department of Human Services and Health 1995; Scavone 1997) but this study showed that the overall participation rate for the profession was low. No other data were found to indicate the number of newsletters produced and the rate of media participation by the profession. These results show minimal participation by the profession in health promotion activities in their local communities. Some of the reasons behind this lack of involvement will be discussed in the next section.

Barriers and Facilitators for Pharmacists Participation

Because health promotion is often seen as an additional activity rather than a way of working or thinking (Anderson 1998, Blenkinsopp et al. 2000), incorporation of health promotion activities into practice requires that a change occur. Dixon (2002) cited his own case of resistance to change with an increasing spiral of dispensing and an unwillingness to do anything unless he was paid. Other researchers (Coper & Gilbert 1985; Ghalamkari & Jenkins 2002; Peterson 1999) have questioned the way pharmacy is practised today. Facilitators to practice change discovered in the pharmacy literature by Roberts, Benrimoj, Chen, Williams, Aslani, Gadiel and Ridoutt (2003), may be classed as experiential or perceived, but in this study no differentiation was made. Although this study found some similar facilitators and barriers to practice change and consequently health promotion participation compared to those in the literature, some different factors also emerged.

This study investigated barriers and facilitators to pharmacist participation in health promotion activities. Participation in something different usually requires a series of modifications to routine guided by a variety of motivating factors. Examples of

barriers to change cited in the literature include lack of time, as well as of staff, knowledge, skills and resources (Berbatis et al. 2003; Dixon 2002; Joffres et al. 2004; Kotecki et al. 2000; PSA 2002; Roberts et al. 2003), but this study also found the additional barriers of fear of public speaking or lack of experience in front of a group reported by one-third of its respondents, a barrier not previously cited in the pharmacy literature. Gowan (1992), and others for example (Pharmaceutical Journal 2001b) have suggested remuneration for health promotions activities is a facilitator to change, but this study found that remuneration was neither a barrier nor a facilitator to pharmacist participation. The surveys in this study also found that requests for the pharmacist to contribute in activities were facilitators to participation. Community service and giving back to their community were facilitators that respondents added without prior prompting in all surveys. Many respondents also suggested that the profession should participate in health promotion activities in order to promote itself despite the apparent barriers to participation.

Nearly two-thirds of respondents in this study cited 'lack of time' or 'time constraints' as a barrier to participation in health promotion activities. This proportion did not change between the 1999 and 2002 Tasmanian surveys. However, only half of the Victorian pharmacists thought that time was a barrier to participation. This is lower than represented in the literature examples which indicated this barrier could be shared by up to 90% of respondents (Bellingham and Buckland 2001; Berbatis et al. 2003; Joffres et al. 2004). Pharmacy students were also aware of the time constraints that could impact on participation in future practice but showed interest in participating in the activities given as examples in the questionnaire. Staff limitations, lack of locum pharmacists, and time constraints experienced by the profession were all mentioned by respondents, particularly those

in rural practice. Therefore despite time constraints being the major barrier, from this study, it was discovered to be not as large a barrier to practice change as indicated by other studies.

This study also found that one-third of respondents lacked confidence about and experience speaking to a group or a larger audience (Tasmania 1999, 33.3%; Tasmania 2002, 29.4%; Victoria 2003, 21.5%). Many respondents were interested in a free presentation skills course, thus confirming Gowan's (1992) findings, but they also indicted that with improvement in presentation and group skills, pharmacists may participate in health promotion activities. A fear of public speaking has not been cited previously in the literature examples reviewed for this study. Group facilitation skills and presentation skills were removed from the draft competency standards for pharmacists in Australia (PSA 2003a) before the final version was released. Therefore, despite numerous incidents requiring complex communication daily in pharmacy practice, public speaking to a group is one aspect of communication skills feared by the pharmacy profession.

Many pharmacists had not been approached to participate in activities outside the pharmacy, but it also appeared from the results from this study that many pharmacists did not seek participation. This research showed that many pharmacists would like to participate in activities such as the examples given in the questionnaire (Appendix 3.1, p. A-22). From the second Tasmanian survey, in 2002, one-third of pharmacists would participate 'because someone asked them to' but only 20% would have participated when asked in the earlier survey in 1999. Interest in both the topic or research opportunities were facilitators suggested in both surveys. However, 'interest in the topic' as a facilitator to participate in health promotion activities

motivated 40% of Tasmanian respondents in 1999 but only half that percentage in 2002. These latter results were similar to those in the Victorian phase of the study. Interestingly, students wished to participate in media presentations far more then providing newsletters. For their qualified colleagues, this trend was reversed. As can be seen from the data for this study, pharmacists may participate in health promotion activities if asked, but they are usually not the initiator of that participation.

This study also showed that lack of remuneration was not a barrier to participation in health promotion activities, and pharmacists usually quoted a low fee for this service. In fact, in this study, respondents replied that if participation promoted the business or the profession, remuneration was not an issue. Payment usually only represented the time taken to deliver the presentation at a rate which equated to the locum rate (assumed to be $30 per hour for the purposes of this study). Respondents acknowledged that if the community group activity was conducted without an external funding source, then the pharmacist would often participate for free. As a community talk usually consists of preparation, travel and the presentation, the rates quoted for reimbursement were far less than those represented by the actual time spent in this activity. Despite remuneration being necessary as suggested in the literature (Gowan 1992; Pharmaceutical Journal 2001b), it was found in this study, that although many would like to be paid or have out of pocket expenses covered, the great majority of pharmacists would not charge for community activities or charge at all, particularly for those groups that do not have funds to pay for this service.

In this study 6–10% of respondent pharmacists and 20% of pharmacy students spontaneously replied that they felt a duty to give back to their community and

educate the public. Other similar facilitators in the literature included increased professional standing and satisfaction or support from management and the ability to foster partnerships. This in turn promoted the profession and the business. This survey provided knowledge of the proportion of pharmacists who considered community service as a facilitator to be important, as respondents included this reply without being prompted by the questionnaire.

Pharmacists noted in the study that the community sometimes requested contributions in an unmanageable time-frame or at time of the day in which the pharmacists could not commit. As many community health promotion activities occur currently without a pharmacist, communities presently would see no apparent reasons to add this profession to their activity or planning group. To be included, pharmacists must therefore go to the community and not wait to be approached as indicated by this study. Another factor affecting Australian pharmacists is that they are required by law to stay in the pharmacy when it is open, unlike their British counterparts, and have to find a locum or close the business in order to participate in outside activities if these are held during normal opening hours. Many felt that 'unmanageable time of requests' contributed to their not participating (Tasmania 1999, 27.1%; Tasmania 2002, 47.1%; Victoria 2003, 43.8%) as health promotion activities are often planned and held during the day, but many noted that the profession must promote itself and contribute to local activities.

The profession also reported additional barriers such as lack of recognition of pharmacists' skills and poor links with other organisations as contributing to lack of involvement in external activities in health promotion. Despite their standing in the community as accessible (Hourihan et al. 2003), knowledgeable (Peterson 1999) and

trusted (Morgan and Levine 2004), pharmacists and students felt the skills their profession has to offer were not recognised by others (Tasmania 1999, 69%; Tasmanian Students 1999, 81.8%; Tasmania 2002, 70.6%; Victoria 2003, 54.5%). Both locally and nationally, the respondents felt that the profession has poor links with other organisations (Tasmania 1999, 41.1%; Tasmania 2002, 35.9%; Victoria 2003, 34.7%) and listed several of these as examples, such as Diabetes Australia, local hospital boards and community organisations. As the profession reports it spends the majority of its time in the dispensary (Berbatis et al. 2003) and the public have a perception of a 'busy unavailable pharmacist', the profession must change its attitude to counteract this barrier.

Thus, the key barriers to participation by pharmacists in health promotion activities revealed in this study were lack of time, not being asked, fear and inexperience when speaking publicly, and a perceived lack of an understanding by the community of pharmacists' knowledge and skills. Remuneration was not a barrier to participation in the activities described in the surveys. The key facilitators to pharmacists' participation were being asked to contribute, interest, research opportunities and community service together with a belief that pharmacists must make the most of opportunities to participate in health promotion activities. The respondents acknowledged the profession must not wait to be asked to participate in activities but must put themselves forward and actively promote the knowledge and skills of the profession.

Other Environmental Factors

The study showed that although pharmacists in rural areas participate more than their urban counterparts in some of the health promotion activities outlined by the surveys,

other factors such as age, hours of work or work location (community or hospital) did not appear to influence the contributions by pharmacists to health promotion activities.

Rural/urban/regional and perception

As discussed in the limitations of this study on p. 19, many pharmacists in Tasmania did not consider that they worked in a rural environment despite official classifications to the contrary. Two-thirds of the Tasmanian respondents cited their major workplace as capital city or urban, despite 60% (The Pharmacy Board of Tasmania, 2003) of Tasmanian pharmacies having a rural classification using the recognised classification structures (Appendix 5.1, A-62, Chapter 4, p. 117). Only a quarter of Tasmanian respondents thought of their workplace as rural, compared to half of their Victorian colleagues. However, when this was adjusted as previously outlined (pp. 149–50) half the Tasmanian respondents were classified as rural (Tasmania 2002, 48.7%; Victoria 2003, 55.4%).

In rural areas of Tasmania in 2002, pharmacists appeared to break though barriers, contributing more than their metropolitan counterparts in Tasmania in participation in external health promotion activities such as community talks. However, it was found that urban pharmacists were more likely to write newsletters. This research showed that rural pharmacists were more likely to be asked to participate in local health promotion activities.

Hours of work

There was some indication in the data that pharmacists who worked fewer hours per week participated in health promotion activities as defined by the survey. However

for a number of respondents this was no barrier to participation. Table A.6.1.57, pp. A-95–96 showed that hours of work do not appear to be a factor in whether or not a pharmacist contributed to community presentations, newsletter productions or media presentations.

Gender

Feminisation of the profession is seen as a factor diminishing the effective workforce. However, the overall average number of hours worked for all pharmacists is 37.8 hours. Male pharmacists work 41.9 hours per week and female pharmacists 32.8 hours per week. Over half of all pharmacists appear to work 40 or more hours per week (AIWH 2003). Two-thirds of female pharmacists are employed as permanent assistants or relievers, and only 20.9% are sole proprietors or 27.6% partner–proprietors. Feminisation of the workforce will be an issue as more graduates are female and more retiring pharmacists are male, thus, a significant change in the workforce will occur over the next 10 years when this retirement occurs if this trend continues.

In this study, female pharmacists worked fewer hours than their male counterparts, as in all phases, the median range for female pharmacists was 31–40 hours per week while male pharmacists worked over 40 hours per week (Table A.6.1.59 and Table A.6.1.60, p. A-98, Table A.6.1.61, p. A-99). Cross-tabulation table data showed that female pharmacists appear to contribute more to community talks, newsletters and media presentations than do male pharmacists (Table A.6.1.58, p. A-97). However, although there were no significant gender differences for the Phase 2 Tasmanian 2002 sample, significantly more urban women pharmacists in the Phase 3 Victorian

2003 sample were involved in health promotion activities than were male pharmacists.

Age

From the results, it can be seen that age was not a factor in participation in health promotion activities. There are many older pharmacists practising in Australia, and this study indicated that about 15% of its respondents were practising pharmacists over the age of 60 (Tasmania 2002, 16.4%; Victoria 2003, 15.1%), which is in line with national data indicating that 11% of pharmacists were over 65 years (AIHW 2003). The Victorian sample did appear older, as the mode for respondents was in the 51–60 age group but the median age (41–50) was the same for both the Tasmania 2002 and Victoria 2003 groups.

Location: Community pharmacy/hospital pharmacy/other

Participation in community talks and newsletter production is often part of a hospital pharmacist's role within the hospital itself. There did not appear to be a contribution outside the pharmacy or hospital. One criticism of the survey by a respondent, who identified as a hospital pharmacist, was that the time-frame of participation was only the past two years. This respondent thought that the survey was skewed to community pharmacy and that also, by including a time limit, the result would be skewed. By not putting a time-frame in the survey, the result is skewed as demonstrated in other research on health promotion activities (Berbatis et al. 2003; Commonwealth Department of Human Services and Health 1995; Gowan 1992; Scavone 1997) by the profession. In these surveys pharmacists indicated that they participated in various activities but the reader has no indication of how much occurred and over what time-frame. Gowan used the previous two years in her study

but with part being retrospective and part prospective results, the actual time frame of this study was unclear (Gowan 1992). The *National Pharmacy Database Project* (Berbatis et al. 2003) only asked its respondents whether particular services are offered, but not whether the community took up this offer.

Reflection, Conclusions and Recommendations

Many of the comments in the surveys indicated that the profession must make time to participate in health promotion activities despite the cost and time imposts. Pharmacists must change community perceptions of the 'busy unavailable pharmacist in the dispensary', where pharmacists currently spend three-quarters of their time. The profession cannot complain that others do not appreciate its knowledge and skills unless it changes practice from within. Those who have taken the plunge and changed their way of working in their pharmacy practice have enjoyed the experience (Dixon 2002).

Some pharmacists recognised the value of activities such as community talks, newsletter and media representation, and recorded that the profession must take advantage of these opportunities. Opportunities similar to those for general practitioners are available within the pharmacy profession (O'Connor-Fleming & Parker 2001), but the pharmacists do not have some of the monetary support afforded by Divisions of General Practice for its members to participate in health promotion activities outside their practice settings. However, this study showed that a lack of remuneration was not a barrier to participation, as almost all respondents would not charge for community activities.

Health promotion activities may require a change of practice, but this change may be one that pharmacists, who currently spend the majority of their time in the dispensary, may not be willing to make. With prescription numbers increasing as the population ages, the profession, without change, will continue as it is now, locked in the 4 walls of the pharmacy itself. Pharmacists are seen as accessible health professionals (Berbatis et al. 2003; Hourihan et al. 2003) but perhaps it is the pharmacy that is accessible not the pharmacist (Anderson 1998; Blenkinsopp et al. 2000; Straub & Straub 1999). Non-verbal body language, physical barriers such as shop counters and raised dispensaries protect the pharmacist from the public.

Pharmacists are seen as drug experts with specialist competencies (Blenkinsopp et al. 2000, p. 8; Ewles & Simnett 1998) but there are many examples in the literature of activities and programmes in the area of promotion of healthy living (Adcock 2004a, 2004b; Andalo 2004; Anderson 1996; Berbatis et al. 2003; Blenkinsopp et al. 2000; Hourihan et al. 2003; Leinweber, Campbell & Trottier 1995; O'Loughlin et al. 1999; Paluck et al. 1994; PSA 1997; Strath et al. 2001; Straub & Straub 1999) within the pharmacy itself. These programmes are often conducted by individual pharmacists or as small project groups as reviewed in the literature both in Australia and overseas. Pharmacists see information supply within the pharmacy (Anderson 1996; PSA 2002; Scavone 1997) of Self Care cards, health promotion leaflets or an electronic information kiosk as 'health promotion'. This is a health promotion activity, but only one facet of the scope of activity afforded by the *Ottawa Charter.* Provision of self-selected printed information in a pharmacy does not require a change in practice just a little floor space.

In this study, it was revealed that the factors that do not influence participation in health promotion activities were age, or work location. Rural pharmacists do participate more in health promotion activities such as community talks but urban pharmacists write more newsletters. Using results from Phases 2 and 3, female pharmacists in the Victorian sample were more involved in health promotion activities while in Tasmania there was no difference between male and female involvement in participation.

With the number of new pharmacists being trained through universities at a rate to equal current attrition rate, a practice change may entice some to stay longer in the workforce. Participation in health promotion activities may inspire pharmacists as a possible alternative to the four walls of the pharmacy itself, whether in a community or hospital setting.

Members of the profession think the profession is left out of activities because others do not appreciate the range of knowledge and skills a pharmacist has to offer. Perhaps now is the time for the profession to offer these services rather than wait to be asked, as indicated by the study findings.

It is recommended that the profession reviews and identifies the factors affecting current community practice. The profession should consider promoting the use of technicians and review the expectations of practice by the profession, such as long opening hours of community pharmacies as discussed in Chapter 2. Availability to work long hours during the day cannot be blamed on feminisation of the industry but rather on the current profession itself, and these issues must be addressed before the crisis point that has been predicted for pharmacists' shortages is reached in 2010.

To encourage participation in health promotion activities such as those described in this study consideration should be given to expansion of the Emergency Locum Service for Rural and Remote Pharmacists (PGA 2004). This would allow rural pharmacists to continue to engage in and increase the level of community service in their local areas.

6.2.3 Pharmacy Student Training in Health Promotion

Health promotion course content is minimal in both in the Australian schools of pharmacy in Tasmania and Victoria and for postgraduate practising pharmacists in Australia. Also, as shown by the review in this study, health promotion or health promotion in rural practice is not a focus within these course options.

The Australian schools of pharmacy refer to the professional organisations for guidance about course content. Both the professional bodies and the WHO recognise the required range of subjects required to practice in the profession today (American College of Clinical Pharmacy 2000; American Society of Health System Pharmacists 2004; FIP 2000; PSA 2004; WHO 1998b), but from Chapter 2, p. 69, it can be seen there is negligible health promotion content in the Australian pharmacy courses reviewed, although the Latrobe University Bachelor of Pharmacy Course in Bendigo did appear to have more health promotion content then the other schools reviewed. However, as the first graduate year of the Pharmacy School is 2004, this cohort would not have influenced the results of the survey. The Department of Pharmacy at Latrobe University does have a rural focus and a unit on rural public health, albeit as a Web-based unit, but health promotion in rural practice is not an integral central

theme in any subjects' outlines from the universities reviewed. Because health promotion for practising pharmacists is an additional course or module, it is seen as an additional skill. Although many of the health promotion skills are generic to all pharmacy practice, a rural focus for health promotion practice was not apparent in the courses reviewed except for that at Latrobe University.

Even in the United Kingdom, where health promotion has been included in courses for a number of years, the effects have not been seen (Blenkinsopp et al., 2000). Many international researchers suggest that health promotion and also public health principles should be included in pharmacy courses (American Society of Health System Pharmacists 1999, 2004; American College of Clinical Pharmacy 2000; Ebbessen et al. 2004; Kotecki et al. 2000; Paluck et al. 1994; PSA 2004), but for schools of pharmacy, 'health promotion' is seen as only one subject among many, despite a possible umbrella of health promotion covering many current subjects.

Third-year medical students at Monash University have a Health Promotion Unit (Monash University 2002c) that combines both theory and practice, with students required to present their work and a prize given. Unfortunately there is no corresponding course for pharmacy students to gain this in-depth understanding of health promotion principles and its potential applications within their chosen profession.

Opportunities for postgraduate study on health promotion in Australia are minimal, reflecting the lack of importance placed on this practice by the profession. Health promotion theory and practice examples are currently included in the *Graduate Accreditation Programme* year for Tasmania for those seeking registration as a

pharmacist. However, for practising pharmacists there is little in the way of options for postgraduate education. With the health promotion course at the Victorian School of Pharmacy poorly attended, few enrolling in the Master of Public Health from Monash University, and the elective module developed by the Australian College of Pharmacy Practice outdated, health promotion is certainly not a significant portion of today's pharmacy professional development and education. Pharmacists using the distance-learning package from the College have to use references about health education from the early 1980s and a text from 2000 on health promotion evaluation, which does not have specific references to the pharmacy profession. This would not constitute a positive experience in health promotion study. Therefore, despite both limited opportunities and scope within current practice, health promotion is not seen as an important education topic for the profession for undergraduate as well as postgraduate students.

The survey data from this study suggested, however, that students were interested in participating in health promotion activities such as community talks, newsletters and the media, as well as community development activities. The barriers and facilitators put forward by students were similar to those of qualified practitioners but community service was important to 20% this group of respondents in the study indicating a strong potential community commitment by future pharmacists. There were no data from this study to indicate any training in health promotion affected the amount of health promotion activity by the profession.

Reflection, Conclusions and Recommendations

Health promotion theory underpins most pharmacy practice yet it is seen as an additional activity. With little health promotion theory and practice in the existing

courses and out-of-date and poorly-attended postgraduate options for the pharmacy profession, the principles of health promotion cannot be incorporated as an integral part of pharmacy practice.

Until health promotion is consistently described within the pharmacy literature and the pharmaceutical professional competencies and standards, it will not be considered as a basis for practice. This lack of consistency therefore hampers the ability of the schools to include health promotion applicable to pharmacy practice in their curricula.

It is recommended that the profession advocate for, and the schools of pharmacy within our universities include, health promotion theory and practice in undergraduate courses, and that they instigate a course similar to the Monash Medicine Health Promotion Unit. For postgraduate opportunities to study in the area of health promotion, the Health Promotion Modules for the *Australian College of Pharmacy Practice & Management* should be rewritten to include references that are up-to-date and relevant to current and potential future pharmacy practice. These modules should also include activities that would encourage pharmacists to acknowledge that health promotion is a way of practice viable within their own practice setting, particularly for those in rural practice.

6.3 Recommendations

To summarise, the following recommendations have emerged from this study:

1. Delete the Health Promotion Professional Practice Standard and define and incorporate all the principles of health promotion into every standard. A description of these principles, with examples of practice specific to the pharmacy profession, should be included in the introduction of these standards.

2. Review current community pharmacy practice. The profession should consider further promoting the use of technicians and review the profession's expectations of practice, such as in the area of dispensing and length of opening hours of community pharmacies.

3. Expand the Emergency Locum Service for Rural and Remote Pharmacists to allow rural pharmacists to continue to engage in and expand health promotion community service in their local areas.

4. Members of the profession should advocate for the Schools of Pharmacy within our universities to include health promotion theory and practice in undergraduate courses and instigate a course similar to the Monash Medicine Health Promotion Unit.

5. Rewrite and update the Health Promotion Modules for the *Australian College of Pharmacy Practice & Management* to include references that are relevant to current and potential future pharmacy practice. These references must acknowledge that health promotion is a way of practice and provide examples to show it is viable within any practice setting.

6.4 Overall Conclusions

Johnston (2004) believes, that what we suffer from in Australia is a lack of financial resources, to nurture, support and develop pharmacy innovations. On one hand we say that nothing can be done without remuneration (Pharmaceutical Journal 2001b) and on the other we have pharmacists giving time for local communities as a community service. As this study showed, remuneration is not a driver of participation in health promotion activities. Interest in the topic, outside requests to participate, community service, and enjoyment of something different are the drivers. Health promotion activities can add to community practice as Peterson (2002) stated currently the model used is 'neither sustainable, competitive, focused nor professionally satisfying'.

The profession must separate and define the concepts of health promotion, preventative health, public health, primary health care and health education. Until health promotion is seen as something other than to 'promote health' by information supply, the pharmacy profession will be at odds with the beliefs and understanding of other health professionals.

Both the immediate past president of the International Pharmaceutical Federation, Peter Kielgast (Smith 2004) and Peterson (2002) stated that pharmacists need to become more aware that the focus has changed from the medicine to the user. As most of the world's developed countries spend nine times more on doctors and medical interventions than they do on disease prevention and medicines, pharmacists must change from a product centred approach to a patient-centred approach (Smith

2004). Pharmacists' competence, knowledge and skills are underutilised and opportunities available in the field of health promotion need to be sought out and used by the profession.

Pharmacists have chances to provide a value-added service, both inside and outside of the pharmacy. Opportunities exist for smoking cessation programmes and weight reduction programmes in the pharmacy to name but two. Outside of the pharmacy there are opportunities in the community setting as shown by the small contributions made presently by the pharmacy profession. Community talks, newsletters and media presentations can enhance the practice examples cited above. Participation in local community development projects can add to these services.

As shown in this study, the profession does participate in health promotion activities outside the pharmacy itself. Some see this area as one where pharmacy should contribute, and if not, other professions will assume the pharmacist's role. Despite the barriers identified, pharmacists recognise a number reasons for participation independent of remuneration but rather for the betterment for the community and the profession as a whole. Participation is not restricted by age, hours of work, practice or location of practice. However, female pharmacists and those pharmacists in rural areas do participate more in their local communities. The results of this study have been used both in conference presentations (Appendix 7, pp. A-100–106) and in lectures to Tasmanian pharmacy students and graduates in health promotion, thus encouraging the future new pharmacists to participate in community activities. However more research in this area is needed to encourage this practice change.

The pharmacy profession in Australia is in crisis. In 2010, 3000 pharmacists will still be required. Young pharmacy graduates are taught a wide range of possible options for practising their profession but the reality is that 75% of the time is spent in the dispensary. Expanding practice to include health promotion activities outside the pharmacy is a dream, not a reality, to most pharmacists.

Health promotion is a way of practice and a way of the future. If the pharmacy workforce is to meet demand, health promotion activities in the community as described in this study may be a driver for change. Both recruitment and retention of pharmacists in rural practice are at critical levels and the opportunities provided by this expanded form of practice may encourage more practitioners to take up this lifestyle and professional option.

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QCPP—see Pharmacy Guild of Australia (PGA) 2001 *Quality Care Pharmacy Program.*

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Pharmacist Participation in Health Promotion Activities: Facilitators and Barriers

by

Helen Howarth B. App. Sci. (Pharm.)

Submitted in fulfilment of the requirements

for the Degree of Master of Medical Science

University of Tasmania

March 2005

APPENDICIES

Appendices

Appendix 1: Acronyms

Abbreviation	Full Name–Pharmacy Related
ACPP	Australian College of Pharmacy Practice
AACP	Australian Association of Consultant Pharmacy
ACP	Australian College of Pharmacy Practice & Management (an amalgamation of the ACPP and AIPM, 2004)
AIPM	Australian Institute of Pharmacy Management
APESMA	Association of Professional, Engineers, Scientists and Managers of Australia
FIP	International Pharmaceutical Federation (Fédération internationale pharmaceutique—FIP)
HMR	Home Medication Review (previously known as Domiciliary Medications Review)
MMR	Medication Management Review
PGA	Pharmacy Guild of Australia
PSA	Pharmaceutical Society of Australia
QCPP	Quality Care Pharmacy Program
RRPWDP	Rural and Remote Pharmacy Workforce Development Program
SHPA	Society of Hospital Pharmacists of Australia

Abbreviation	Full Name–Pharmacy/Rural Related
ABS	Australian Bureau of Statistics
ARIA	Accessibility/Remoteness Index of Australia
GISCA	Geographical Information Systems Centre of Australia or National Key Centre for Social Applications of Geographic Information Systems
LGA	Local Government Area
NRHA	National Rural Health Alliance
PhARIA	Pharmacy Accessibility/Remoteness Index of Australia
RRMA	Rural, Remote and Metropolitan Areas (Classification System)
SD	Statistical Division
SLA	Statistical Local Area

Abbreviation	Full Name–Other
AIHW	Australian Institute of Health and Welfare
DVA	Department of Veterans' Affairs
HCI	Health Care Intelligence Pty Ltd
WHO	World Health Organisation

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Appendix 2 : Pharmacy Practice Standards and Competency Standards
2.1 PSA Pharmacy Standards: Health Promotion, 2002
2.2 Quality Care Pharmacy Program: Relevant Standards, 2001
2.3 Competency Standards for Pharmacists in Australia, 2003

Appendix 3: Questionnaires

3.1 Pharmacist Questionnaire

Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers Questionnaire

Please mark ONE BOX unless requested to do so otherwise

1) In which state or territory do you practise?

ACT ☐ NT ☐ NSW ☐ SA ☐ TAS ☐ VIC ☐ WA ☐

2) In what area of pharmacy practice do you work (may be more than one, please number boxes in order of time spent during an average week)

Community Pharmacy ☐

Hospital Pharmacy ☐

Education ☐

Research ☐

Government Department (Specify).....

Other (Specify).....

3) What is your position within your major work place?

Dispensing Pharmacist ☐ Drug Information Pharmacist ☐

Other (Specify).....

4) In what area do work?

Capital City ☐ Urban Area ☐ Rural Area ☐

5) What sort of pharmacy qualification do you have?

Pharmaceutical Certificate ☐ B. Applied Science (Pharmacy) ☐ Bachelor of Pharmacy ☐

Other .....

6) If you are undertaking postgraduate study please indicate below.

Honours ☐ Masters ☐ Doctorate ☐ Trainee ☐

7) Please state other qualifications in full

MBA ☐ Train the Trainer Certificate ☐ SHPA Fellowship ☐

ACPP Membership ☐ AACP Accreditation ☐

Other (Specify).....

Currently studying (Specify).....

8) What age group are you?

21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ Over 70 ☐

9) Are you?

Female ☐ Male ☐

10) In what year did you register?.....

11) How many years have you practiced?.....

12) How many hours of paid pharmacy work do you undertake during an average week?

Nil ☐ up to 15 ☐ 16-30 ☐ 31-40 ☐ 40 or more ☐

13) Have you ever given community talks in the past two years?

Yes ☐ No ☐

If yes, describe to whom and content
For example:

Title and Context	**Audience & Number Attended**	**Length of Talk**	**Preparation Time**	**Aids and Handouts**
Drugs Implicated in Falls (Falls Injury Prevention Workshop)	Health Professionals (80)	1 hour	4 hours (including research & overhead-printing)	Own overheads, Self Care Falls Card, Self Care Osteoporosis Card, Medi-Lists.
How Our Bodies Fight Infections (Be Wise with Medicines Week)	6-7 year old, school class (2 classes 40 in total)	20 min.	2 hours	Colouring in - Germs, word puzzle (self made), some mixtures from a pharmacy, cotton wool white blood cells and TicTac germs
Wise Use of Medicines (Single Talk)	Senior Citizens (25)	30 min.	10 min. (done before)	Pamphlets –general health, Be Wise with Medicines Kit and some own overheads.

Title	**Audience & Number Attending**	**Length of Talk**	**Preparation Time**	**Aids and Handouts**

14) Have you written for any newsletters or pamphlets in the last two years?

Yes ☐ No ☐

If yes, describe to whom and content
For example:

Title and Context	Requested by	Intended Audience	Newsletter	Handout	Time to Prepare
Drugs Used in Osteoporosis (Osteoporosis Awareness Day)	Domiciliary Nurses	Community Members		4	2 hours

Title and Context	Requested by	Intended Audience	Newsletter	Handout	Time to Prepare

15) Have you participated in any media productions (radio, newspapers or TV) in the last two years?

Yes ☐ No ☐

If yes, describe to whom and content

Title and Context	Requested by	Intended Audience	Type of Media	Part of a National Campaign	Single Item	Length of Talk or Article	Time to Prepare

16) Where do you get your information for talks, publications or the media?

Speakers Kits ☐

Make up Own ☐

Other (Specify).....

.....

.....

17) Where do you get you resources such as overheads or slides?

Speakers Kits ☐

Make up Own ☐

Other (Specify).....

.....

.....

18) Where do you get your handouts?

Speakers Kits ☐

Make up Own ☐

Other (Specify).....

.....

.....

19) Have you participated in any community development projects in your area? Eg Falls Prevention Programs, School Health Week, Wise Use of Medicines Campaigns

Title	**Intended Audience**	**Type of Participation – Organising Committee, Resource, Other**	**Was this Part of a National Campaign**

20) Would you participate in the activities previously described if you were paid?

Yes ☐ No ☐ Out of pocket expenses only ☐

If yes, please estimate these charges .....

Comments: .....

21) Do you charge for community talks to groups?

No ☐ <$25 ☐ $26-50 ☐ $51-100 ☐ $101-200 ☐ More ☐

Comments.....

.....

22) Do you charge for media commitments?

No ☐ <$25 ☐ $26-50 ☐ $51-100 ☐ $101-200 ☐ More ☐

Comments.....

.....

23) What are the reasons for doing this type of work?

Would like to do this ☐

Someone asked me ☐

Interest in the topic ☐

Research ☐

Other

.....

.....

.....

24) What would prevent you participating in these sorts of activities? Briefly explain.

No time ☐

Not a pharmacist's role ☐

Never been approached ☐

Lack of experience in speaking publicly ☐

Other

.....

.....

.....

25) Would you participate in the activities if you could develop your presentation skills?

Yes ☐ No ☐

26) Would you like to participate in a free workshop aimed at improving presentation skills, identifying and making the most of available resources and developing group work skills?

Yes ☐ No ☐

27) Are you aware of any activities of organisations where pharmacists are not represented but their input would be beneficial?

.....

.....

.....

28) What do you think contributes to pharmacists not being approached to be involved in a range of health promotion projects?

Lack of understanding of the skills a pharmacist can offer ☐

Pharmacy has poor links with other organisations and services ☐

Unmanageable time of requests ☐

Other

.....

.....

.....

29) **Any other comments please.**

.....

.....

.....

Thankyou for contributing to this research. As a profession we are an essential part of health promotion but for some activities and projects the expertise that could be provided by pharmacists is not called on.

Name	Helen Howarth
Address	Department of Rural Health
	University of Tasmania
	PO Box 1214
	Launceston TAS 7250
Phone	03 6278 2210(H) or 03 6226 2173(W)
Fax	03 6226 2870(W)
e-mail	Helen.Howarth@utas.edu.au

If you would like to participate further in this study or discuss the positive contribution we as pharmacists can make please fill in your contact details below.

We <u>are</u> an essential part of health care and rightly so! THANKYOU!

Contact details (Optional)

Name	
Address	
Phone	
Fax	
e-mail	

3.2 Pharmacy Student Questionnaire

Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers Student Questionnaire

Please mark ONE BOX unless requested to do so otherwise

1) In which state or territory are you studying?

ACT ☐ NT ☐ NSW ☐ SA ☐ TAS ☐ VIC ☐ WA ☐

2) What undergraduate year are you studying?

1st ☐ 2nd ☐ 3rd ☐ 4th ☐

3) If you are undertaking postgraduate study please indicate below.

Honours ☐ Masters ☐ Doctorate ☐ Trainee ☐

4) In what area of pharmacy practice would you like to work (may be more than one, please number boxes in order of preference)

Community Pharmacy ☐

Hospital Pharmacy ☐

Education ☐

Research ☐

Government Department (Specify).....

Other (Specify).....

5) In what area will you <u>most</u> probably work?

Capital City ☐ Urban Area ☐ Rural Area ☐

6) Please state other qualifications in full (eg. MBA, Train the Trainer Certificate, other degree, Pharmaceutical Care)

.....

7) What age group are you?

17–20 ☐ 21–30 ☐ 31–40 ☐ over 41 ☐

8) Are you?

Female ☐ Male ☐

9) Would you consider giving community talks?

Already doing this ☐ No ☐ Yes, sometime in the future ☐

10) Would you consider writing newsletters or pamphlets?

Already doing this ☐ No ☐ Yes, sometime in the future ☐

11) Would you consider participating in any media productions (radio, newspapers or TV)?

Already doing this ☐ No ☐ Yes, sometime in the future ☐

12) Would you participate in any community development projects in your area? Eg Falls Prevention Programs, School Health Week, Wise Use of Medicines Campaigns as a organising committee member or resource

Yes ☐ No ☐ Already doing this ☐

13) Would you participate in the activities previously described if you were paid?

Yes ☐ No ☐ Out of pocket expenses only ☐

14) Would you expect out of pocket expenses to be covered?
(eg petrol or locum expenses)

Yes ☐ No ☐

If yes, please estimate these charge.....

15) Would you charge for community talks to groups?

No ☐ <$25 ☐ $26-50 ☐ $51-100 ☐ $101-200 ☐ More ☐

Comments .....

.....

16) Would you charge for media commitments?

No ☐ <$25 ☐ $26-50 ☐ $51-100 ☐ $101-200 ☐ More ☐

Comments: .....

.....

17) What would be the reasons for doing this type of work? Briefly list reasons.

Would like to do this ☐

Someone asked me ☐

Interest in the topic ☐

Research ☐

Other

.....

.....

18) What would prevent you participating in these sorts of activities? Briefly explain.

No time ☐

Not a pharmacist's role ☐

Never been approached ☐

Lack of experience in speaking publicly ☐

Other

.....

.....

.....

19) Would you participate in the activities if you could improve your presentation skills?

Yes ☐ No ☐

20) Would you like to participate in a free workshop aimed at improving presentation skills, identifying and making the most of available resources and developing group work skills?

Yes ☐ No ☐

19) Are you aware of any activities of organisations where pharmacists are not represented but their input would be beneficial?

.....

.....

.....

20) Why do you think pharmacists are not being approached to be involved in a range of health promotion projects?

Lack of understanding of the skills a pharmacist can offer ☐

Pharmacy has poor links with other organisations and services ☐

Unmanageable time of requests ☐

Other

.....

.....

.....

.....

22) Any other comments please.

.....

.....

.....

.....

As a profession we are an essential part of health promotion but for some activities and projects the expertise that could be provided by pharmacists is not called on

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If you would like to participate further in this study or discuss the positive contribution we as pharmacists can make please fill in your contact details below.

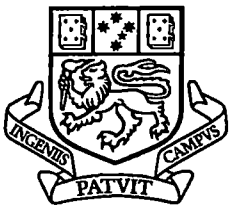
We <u>are</u> an essential part of health care and rightly so! THANKYOU!

Contact details (Optional)

Name	
Address	
Phone	
Fax	
e-mail	

3.3 Participant Information Letters

Pilot



UNIVERSITY OF TASMANIA

Faculty of Health Science
GPO Box 252-68
Hobart 7001

30 November 1998

Dear Pharmacist,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil the requirements of a master's degree in Medical Science. The title is "Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers"

This questionnaire has the approvals of the Pharmacy Guild of Australia, Tasmanian Branch of the Pharmaceutical Society of Australia and the Faculty of Health Science (Pharmacy).

It also has received ethical approval from the University Ethics Committee (Human Experimentation). If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted, contact the Chair or Executive Officer of the University Ethics Committee (Human Experimentation). (In 1998 the Chair is Dr Margaret Otlowski, phone (03) 62 267569 and the Executive Officer is Ms Chris Hooper, phone (03) 62 262763.)

All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university. However, you may choose to identify yourself for a future interview or workshop participation on the separate sheet provided.

Please return the questionnaire in the self addressed envelope provided by Friday, 11th December 1998.

Should you wish to discuss details of any activity related to this study, please do not hesitate to contact me or Associate Professor Judi Walker.

Thankyou for your participation in this research study.

Helen Howarth
Masters of Medical Science Student
Phone: 6222 7209

Associate Professor Judi Walker
Supervisor
Phone: 6324 4011
Fax: 6324 4040

Tasmania 1999

UNIVERSITY OF TASMANIA

Faculty of Health Science
GPO Box 252-68
Hobart 7001

18th January 1999

Dear Pharmacist,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

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All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university. However, you may choose to identify yourself for a future interview or workshop participation on the separate sheet provided.

Please return the questionnaire in the self addressed envelope provided by Friday, 12th February 1999.

Should you wish to discuss details of any activity related to this study, please do not hesitate to contact me or Associate Professor Judi Walker.

Thankyou for your participation in this research study.

Helen Howarth
Masters of Medical Science Student
Phone: 6222 7209

Associate Professor Judi Walker
Supervisor
Phone: 6324 4011
Fax: 6324 4040

UNIVERSITY
OF TASMANIA

University Department of
Rural Health

October 1999

Dear Pharmacy Student,

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

As pharmacy students you may have ideas of ways pharmacists can contribute to health promotion and have an opinion about the future of the pharmacy profession.

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of their work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in the those that may take place in the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This study has the approvals the approvals of the Pharmacy Guild of Australia (Tasmanian Branch), Pharmaceutical Society of Australia (Tasmanian Branch) and the Pharmacy Board of Tasmania.

It also has received ethical approval from the University Ethics Committee (Human Experimentation). If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted, contact the Chair or Executive Officer of the University Ethics Committee (Human Experimentation). (In 1998 the Chair is Dr Margaret Otlowski, phone (03) 62 267569 and the Executive Officer is Ms Chris Hooper, phone (03) 62 262763.)

All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university. However, you may choose to identify yourself for a future interview or workshop participation on the separate sheet provided.

Please return the questionnaire by 31 October, 1999.

Should you wish to discuss details of any activity related to this study, please do not hesitate to contact me or Professor Judi Walker.

Thankyou for your participation in this research study.

Helen Howarth
Masters of Medical Science Student
Phone: 03 6226 2173

Professor Judi Walker
Supervisor
Phone: 03 6324 4000; Fax: 03 6324 4040

Locked Bag 1 – 372 Launceston
Tasmania Australia 7250
Telephone (03) 6324 4000
Phone: 6324 4011
Fax: 6324 4040

UNIVERSITY
OF TASMANIA

University Department of
Rural Health

November 2002

Dear Pharmacist,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

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This study has the approvals the approvals of the Pharmacy Guild of Australia (Tasmanian Branch), Pharmaceutical Society of Australia (Tasmanian Branch) and the Pharmacy Board of Tasmania.

It has also received ethical approval from The Southern Tasmania Social Sciences Human Research Ethics Committee. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted, contact the Chair or Executive Officer of the Southern Tasmania Social Sciences Human Research Ethics Committee. The Chair is A/Prof Margaret Otlowski (Ph 03 6226 7569) and the Executive Officer is Amanda McAully (Ph 03 6226 2763)

All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university for a period of 5 years and no information will be released that can possibly identify an individual. However you may choose to identify yourself for a future interview or focus group on the separate sheet of paper provided. This information will be stored separately from the survey.

Please return the questionnaire by 10th December, 2002.

Should you wish to discuss details of any activity related to this study, please do not hesitate to contact me or Professor Judi Walker.

Thankyou for your participation in this research study.

Helen Howarth
Masters of Medical Science Student
Phone: 03 6226 2173

Professor Judi Walker
Supervisor
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Locked Bag 1 – 372 Launceston
Tasmania Australia 7250
Telephone (03) 6324 4000
Facsimile (03) 6324 4040
Web
www.ruralhealth.utas.edu.au

Victoria 2003

UNIVERSITY
OF TASMANIA

University Department of
Rural Health

October 2003

Dear Pharmacist,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

This study has the approvals Pharmacy Guild of Australia, Certificate 544, Rating A1.

It has also received ethical approval from The Southern Tasmania Social Sciences Human Research Ethics Committee. If you have any concerns of an ethical nature or complaints about the manner in which the project is conducted, contact the Chair or Executive Officer of the Southern Tasmania Social Sciences Human Research Ethics Committee. The Chair is A/Prof Margaret Otlowski (Ph 03 6226 7569) and the Executive Officer is Amanda McAully (Ph 03 6226 2763)

All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university for a period of 5 years and no information will be released that can possibly identify an individual. However you may choose to identify yourself for a future interview or focus group on the separate sheet of paper provided. This information will be stored separately from the survey.

Please return the questionnaire by 10th November, 2003.

Should you wish to discuss details of any activity related to this study, please do not hesitate to contact me or Professor Judi Walker.

Thankyou for your participation in this research study.

Helen Howarth
Masters of Medical Science Student
Phone: 03 6226 2173

Professor Judi Walker
Supervisor
Phone: 03 6324 4000; Fax: 03 6324 4040

Locked Bag 1 – 372 Launceston
Tasmania Australia 7250
Telephone (03) 6324 4000
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www.ruralhealth.utas.edu.au

COMMENTS ON QUESTIONNAIRE

This questionnaire is being pre-tested on a small group of pharmacists. We welcome your suggestions for improvement. Please comment below or annotate the questionnaire itself whilst filing it in. Thankyou for your assistance

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Appendix 4: Ethics Applications

4.1 Ethics Application 1998

UNIVERSITY OF TASMANIA

Academic Services
GPO Box 252-47
Hobart, Tasmania 7001 Australia
Tel: 03 62262763 Fax: 03 62267871
Email: Human.Ethics@utas.edu.au

ETHICS COMMITTEE (HUMAN EXPERIMENTATION)

APPLICATION: INVESTIGATION USING HUMAN SUBJECTS

INVESTIGATION NUMBER (Office use)
TITLE of proposed investigation A Study of the Barriers and Facilitators Affecting Pharmacist Involvement in Health Promotion Activities

A. OUTLINE OF PROPOSAL

Applicants

Title/Name	Position	Department
Dr. Judi Walker	**Ass. Professor**	**Faculty of Health Science (Rural Health)**
Dr. Roger Rumble	**Senior Lecturer**	**Faculty of Health Science (Pharmacy)**
Helen Howarth	**Masters of Medical Sciences (Student)**	**Faculty of Health Science (Medicine)**

Purpose

1. Research as partial fulfilment of the requirements for the degree of Masters of Medical Science
2. Develop guidelines arising from the proposed research.

Aims

- To determine:
  a) The facilitators for pharmacists who do participate in community health promotion projects
  b) The barriers to pharmacists who do not participate in community health promotion projects
- To determine the facilitators and barriers perceived by pharmacy students and trainees
- To develop strategies to overcome the identified barriers
- To prepare a model training course for pharmacists and students

Justification

Pharmacists are a group of health professionals who are in both urban and rural

communities within this state. Pharmacists are an accepted member of the health system but are only considered as a link between the medical practitioner and the patient. Pharmacists have an in depth knowledge of medications and their correct and efficacious use. They have as many contacts with individual consumers as medical practitioners in any year. Yet how often is that knowledge put to use in situations outside the pharmacy?

No study appears to have investigated why pharmacists do not participate more in health promotion activities outside community pharmacies. The great majority of pharmacists work in a community pharmacy setting.

The Australian Health Goals and Targets in the year 2000 and Beyond[1] identify that change is needed in community and health professionals' perception of what is meant by health and a change is needed within the culture of health professionals.

In a study published in 1994 and conducted in or before 1992 in British Columbia, Canada by Paluck et.al[2]. 94.8% of pharmacists never or only once per year spoke to community groups. 4.6% spoke once per month and 0.6% spoke weekly or daily. 35.6% never or only once per year participated in community health events. The study does not identify the type of community talk or if the community health events are inside or outside the pharmacy. The study concludes "pharmacists must take the initiative to offer health educations and prevention services as the client is often unaware of the pharmacist's capabilities in this area

The Tasmanian Health Goals and Targets involving injury, heart disease, cancers, mental health and alcohol and drugs all have extensive community campaigns using preventative strategies. Pharmacists can participate and enhance planned strategies.

Perceptions of 3rd and 4th pharmacy students could provide a vision of the future

Period of investigation

Commencement date **1st Jan 1998** Completion date **31th Dec 1999**

Funding

(a) Do you intend to apply for a grant to fund this project? YES

(b) If 'YES'

Which funding bodies are you applying to? **Pharmacy Practice Research Grants**

Population Health Research Grant (Received funding $2500 over 1 year) YES

Will you undertake the project if your grant application is unsuccessful?

Review of ethical considerations

Has this protocol previously been submitted to the University Ethics Committee? NO

Does this project need the approval of any other Ethics Committee?

If 'YES', what is its current status? NO

B. PROCEDURES

[1] National Health Strategy Achieving Cultural Change – Macklin Report

[2] Paluck, EC, Stratton TP, Eni GO. Community Pharmaicsts' Participation in Health Education and Disease Prevention Activities Can. J. Pub. Health 1994;85: 389-392

Detailed procedures

Part 1

- A questionnaire to determine pharmacists level of participation in health promotion activities, and barriers and facilitators associated with these activities will be developed.
- This questionnaire will be trialed using a pilot study sample of 5% of resident pharmacists registered in Tasmania. This group will receive an additional page for comments on all aspects of the questionnaire. All questionnaires will contain reply paid envelopes.
- Their comments will be used to modify the questionnaire.
- The remaining 95% of resident pharmacists registered in Tasmania as well as all 3rd and 4th year pharmacy students and trainees in Tasmania will be sent the modified questionnaire. All questionnaires will contain reply paid envelopes.
- The results will be analysed.
- Interest will be invited from pharmacists and students to undertake a training course in health promotion activities.
-

Part 2

- If funding permits the questionnaire will be sent to the pharmacists within the rest of Australia. All questionnaires will contain reply paid envelopes.

Part 3

- Data will be statically analysed by parametric and non parametric methods as appropriate.

Part 4

- Focus groups will be conducted within the state using the results to develop strategies to overcome the identified barriers.
- A training package will be developed to equip pharmacists with the skills to participate in health promotion activities
- The model training course for pharmacists and students who have expressed interest in undertaking this course, will be conducted.
- Survey of participants will be conducted four months after completing the training course to determine satisfaction with the course and level of participation in health promotion activities.

Part 5

- A written report will be prepared.

Part 1

- Initially a questionnaire will be trialed using a pilot study sample of 5% of resident pharmacists registered in Tasmania. This group will receive an additional page for comments on all aspects of the questionnaire. All questionnaires will contain reply paid envelopes.
- Their comments will be used to modify the questionnaire as appropriate .pharmacists, trainees and students
- The remaining 95% of registered Tasmanian pharmacists as well as all 3rd and 4th year pharmacy students and trainees in Tasmania will be sent the modified questionnaire. All questionnaires will contain reply paid envelopes.
- The results of the Tasmanian group will be analysed and the questionnaire modified again if necessary.

Part 2

- If funding permits the questionnaire will be sent to the pharmacists within the rest of Australia. All questionnaires will contain reply paid envelopes.

Part 3

- Data will be statically analysed by parametric and non parametric methods as appropriate approved procedures

Part 4

- Focus groups will be conducted within the state using the results.
- Some implementation can occur with those who show interest.

Part 5

- A written report will be prepared.

Where is this project to be conducted?

The pilot group will consist of all pharmacist registered in Tasmania as well as students trainees and graduate diploma students. Criteria are those with addresses within the state. The main questionnaire will be sent to a proportion of registered pharmacists in other states and territories.

Selection and recruitment of subjects

Participants will be sent a questionnaire. Returning of this questionnaire is a voluntary process.

Subjects for Part 1.

All pharmacists registered and living in Tasmania.

All 3rd, 4th year pharmacy students and trainees in Tasmania

Subjects for Part 2

All pharmacists registered in other states and territories

Personal information

Replies will be anonymous with appropriate coding on all data. Participants may identify themselves on a separate piece of paper. Personal information collected will consist of contact details for future personal interviews. These interviews will be conducted by phone or face to face interviews in a location and time convenient to the participants. Pseudonyms, either chosen by the participants or the researcher, will replace all names in the data. Audiotapes and personal information will be secured in accordance with the NH&MRC guidelines.

Potential risks

There are no potential risks to this project.

Pre and post contact

N/A

Remuneration

N/A

Confidentiality and anonymity

All data collected during the course of the research will be regarded as confidential. Data will be stored in a locked filing cabinet in the Department of Community and Rural Health, during and after data collection. The data will be kept for a minimum of five years after completion of the study and then destroyed.

Pseudonyms will appear on all documentation. The pseudonym may be chosen by the participant or myself if so desired.

Administration of substances/agents

N/A

Human tissue or body fluid sampling

N/A

Other ethical issues N/A
Information sheet Please find attached a copy of the introductory guidelines
Consent form N/A

C. DECLARATIONS
Statement of scientific merit The *Head of Department* is required to sign the following statement: This proposal has been considered and is sound with regard to its merit and methodology. **Prof. Alan Carmichael** Dean of Faculty of Health Science (Signature) (Date)
Conformity with NHMRC guidelines The *chief investigator* is required to sign the following statement: I have read and understood the NHMRC *Statement on Human Experimentation and Supplementary Notes 1992*. I accept that I, as chief investigator, am responsible for ensuring that the investigation proposed in this form is conducted fully within the conditions laid down in the NHMRC Statement and any other conditions specified by the University Ethics Committee (Human Experimentation). **Dr. Judi Walker** (Signature) (Date)
Conformity with code of practice: human tissue and body fluid sampling The *chief investigator* is required to sign the following statement in relation to relevant research projects/teaching exercises: I have read the Ethics Committee (Human Experimentation) *Code of Practice: Human Tissue and* *Body Fluid Sampling* and confirm that this Code will be followed. **Not applicable** (Signature) (Date)
Signatures of other investigators **Mrs Helen Howarth** **Masters Student** (Signature) (Date)

4.2 Ethics Application 2002

UNIVERSITY OF TASMANIA

Research and Development Office
GPO Box 252-01
Hobart, Tasmania 7001 Australia
Tel: 03 62262763 Fax: 03 62267148
Email: Human.Ethics@utas.edu.au

HUMAN RESEARCH ETHICS COMMITTEE

APPLICATION: INVESTIGATION INVOLVING HUMAN SUBJECTS

INVESTIGATION NUMBER (Office use)
TITLE of proposed investigation Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers

A. OUTLINE OF PROPOSAL

Applicants

Title/Name	Position	School or Discipline
Chief Investigator/Supervisor **Prof. Judi Walker**	**Director**	**University Department of Rural Health**
Phone **6324 4000** Fax 6324 4040 Email **Judith.Walker@utas.edu.au**		
Other Investigator(s) / Students **Dr. Roger Rumble**	**Senior Lecturer**	**School of Pharmacy**
Phone **6226 2190** Fax 6226 2870 Email **R.Rumble@utas.edu.au**		
Helen Howarth	**Masters of Medical Science Student**	**University Department of Rural Health**
Phone **6226 2173** Fax 6226 2870 Email **Helen.Howarth@utas.edu.au**		

Purpose

1. Research as fulfilment of the requirements for the degree of Masters of Medical Science
2. Develop guidelines from the proposed research

Aims

- To determine:
  a) The facilitators for pharmacists who do participate in community health promotion projects
  b) The barriers to pharmacists who do not participate in community health promotion projects
- To determine the facilitators and barriers perceived by pharmacy students and trainees
- To develop strategies to overcome the identified barriers

Justification

This study commenced in 1998 and surveys conducted in 1998 and 1999. Further research is required to complete this study.

Pharmacists are a group of health professionals who are in both urban and rural communities within this state. Pharmacists are an accepted member of the health system but are only considered as a link between the medical practitioner and the patient. Pharmacists have an in depth knowledge of medications and their correct and efficacious use. They have as many contacts with individual consumers as medical practitioners in any year. Yet how often is that knowledge put to use in situations outside the pharmacy?

Initially, no study appears to have investigated why pharmacists do not participate more in health

promotion activities outside community pharmacies. The great majority of pharmacists work in a community pharmacy setting.

The Australian Health Goals and Targets in the year 2000 and Beyond[3] identify that change is needed in community and health professionals' perception of what is meant by health and a change is needed within the culture of health professionals.

In a study published in 1994 and conducted in or before 1992 in British Columbia, Canada by Paluck et.al[4]. 94.8% of pharmacists never or only once per year spoke to community groups. 4.6% spoke once per month and 0.6% spoke weekly or daily. 35.6% never or only once per year participated in community health events. The study does not identify the type of community talk or if the community health events are inside or outside the pharmacy. The study concludes "pharmacists must take the initiative to offer health educations and prevention services as the client is often unaware of the pharmacist's capabilities in this area

The Tasmanian Health Goals and Targets involving injury, heart disease, cancers, mental health and alcohol and drugs all have extensive community campaigns using preventative strategies. Pharmacists can participate and enhance planned strategies.

Since the study by Paluck et. al. additional studies still have not addressed this particular issue. Health promotion in pharmacy has been investigated but usually in the context of a pharmacy. Pharmacy Schools have introduced Health Promotion into the curricula in more detail but as indicated in the Pharmaceutical Society of Australia's 'Professional Practice Standards'[5] in the main health promotion equals health education. The English texts of 'Health Promotion for Pharmacists, A. Blenkinsopp et. Al. (2000) [6]discusses the role of pharmacists as a driver of change with individuals within the pharmacy setting and encourages participation in other settings.

Perceptions of 3rd and 4th pharmacy students were surveyed to a vision of the future

Period of investigation

Commencement date	22July2002	Completion date	31July2003

Funding
Previous Funding -Population Health Research Grant (Received funding $2500 over 1 year)

Do the investigators have any financial interest in this project? **NO**

[3] National Health Strategy Achieving Cultural Change – Macklin Report
[4] Paluck EC, Stratton TP, Eni GO. Community Pharmacists' Participation in Health Education and Disease Prevention Activities Can. J. Pub. Health 1994;85: 389-392
[5] Pharmaceutical Society of Australia. Professional Practice Standards 1999
[6] Blenkinsopp A, Panton R, Anderson C. Health Promotion for Pharmacists Oxford University Press 2000 ISBN 0 19 263044 X

Review of ethical considerations

Has this protocol previously been submitted to the University Ethics Committee? **YES**

This project was submitted and approved in 1998. More work is needed for completion of the study. (H4274, Final report 2001, Archived)

Does this project need the approval of any other Ethics Committee? **NO**

Relevant references

(a) By investigator -Nil
(b) By others

1. National Health Strategy Achieving Cultural Change – Macklin Report
2. Paluck EC, Stratton TP, Eni GO. Community Pharmacists Participation in Health Education and Disease Prevention Activities Can. J. Pub. Health 1994;85: 389-92
3. Pharmaceutical Society of Australia. Professional Practice Standards 1999
4. Blenkinsopp A, Panton R, Anderson C. Health Promotion for Pharmacists Oxford University Press 2000 ISBN 0 19 263044 X

B. PROCEDURES

Detailed procedures

Part 1

- A questionnaire was developed in 1998 to determine pharmacist's level of participation in health promotion activities, and barriers and facilitators associated with these activities.
  - Initially the questionnaire was trialed using a pilot study sample of 5% of resident pharmacists registered in Tasmania. This group received an additional page for comments on all aspects of the questionnaire. All questionnaires contained reply paid envelopes.
  - Their comments were to modify the questionnaire as appropriate for pharmacists, trainees and students
  - In 1999 the remaining 95% of registered Tasmanian pharmacists as well as all 3rd and 4th year pharmacy students and trainees in Tasmania were sent the modified questionnaire. All questionnaires will contain reply paid envelopes.
  - The results of this Tasmanian group were analysed and the questionnaire modified again if necessary.
  - The Tasmanian survey will be reconducted with the same method to establish any change over time.
  - If the response rate is low, voluntary participation in follow-up face-to-face interviews will be conducted.

Part 2

- The questionnaire will be sent to the pharmacists in Victoria outside metropolitan Melbourne using the same method as the initial questionnaire. All questionnaires will contain reply paid envelopes.

Part 3

- Data will be statically analysed by parametric and non parametric methods as appropriate approved procedures

Part 4

- Focus groups will be conducted within the state using the results.

Part 5

- A written report will be prepared.

Where is this project to be conducted?

The pilot group consisted of all pharmacist registered in Tasmania as well as students trainees and graduate diploma students. Criteria are those with addresses within the state. The main questionnaire will be sent to a proportion of registered pharmacists in Victoria.

SUBJECTS

Selection of subjects

Selection and recruitment of subjects

Participants will be sent a questionnaire. Returning of this questionnaire is a voluntary process.

Subjects for Part 1.
All pharmacists registered and living in Tasmania.
All 3rd, 4th year pharmacy students and trainees in Tasmania
Subjects for Part 2
All pharmacists registered in Victoria, Australia

Recruitment of subjects
Pharmacists and students will be sent the questionnaire after permission has been sought from the Pharmacists' Registration Board (previously the Pharmacy Board of Tasmania) and the Pharmacy Board c Victoria. Replies will be anonymous with appropriate coding on all data

Information about subjects
Replies for the surveys conducted in 1998 and 1999 are held according to the NH & MRC Guidelines in a locked filing cabinet in the School of Pharmacy, University of Tasmania, Hobart
Replies will be anonymous with appropriate coding on all data. Participants may identify themselves on a separate piece of paper. Personal information collected will consist of contact details for future follow-up face-to-face interviews on a small (<5%) subset to surveyed pharmacists or students, who will not be coerced in any way and will be advised of their right to withdraw from interview at any stage. These interviews will be conducted by phone or face to face interviews in a location and time convenient to the participants. Pseudonyms, either chosen by the participants or the researcher, will replace all names in the data. Audiotapes and personal information will be secured in accordance with the NH&MRC guidelines.
Information sought from the professional Boards will be covered by the constraints listed above.
No data will be obtained from any Commonwealth Government Agency

Potential risks
There are no potential risks to this project.

Post contact
There will be no post contact

Remuneration
No payment will be made to the subjects

Confidentiality and anonymity
All data collected during the course of the research will be regarded as confidential. Data will be stored in a locked filing cabinet in the School of Pharmacy, during and after data collection. The data will be kept for a minimum of five years after completion of the study and then destroyed.
Pseudonyms will appear on all documentation. The pseudonym may be chosen by the participant or myself if so desired

Administration of substances/agents
N/A

Human tissue or body fluid sampling
N/A

Other ethical issues
Nil

Information sheet
Please find attached a copy of the introductory guidelines

Consent form
N/A.

C. DECLARATIONS

Statement of scientific merit

(Name of Head of School) (Signature) (Date)

* In some schools the signature of the Head of Discipline may be more appropriate.
* The certification of scientific merit may not be given by an investigator on the project.

Conformity with NHMRC guidelines

The *chief investigator* is required to sign the following statement:
I have read and understood the *National statement on ethical conduct in research involving humans 1999*. I accept that I, as chief investigator, am responsible for ensuring that the investigation proposed in this form is conducted fully within the conditions laid down in the *National Statement* and any other conditions specified by the University Human Research Ethics Committee.

(Name of chief investigator) (Signature) (Date)

Signatures of other investigators
The other investigators should sign to acknowledge their involvement in the project and to accept the role of the chief investigator.

(Signature) (Date)

Dr. Roger Rumble

Helen Howarth

19th September 2002

Dear A/Prof Otlowski,

Enclosed are the changes requested by the Ethics Committee.

These changes are submitted by Dr. Roger Rumble, an associate supervisor on the project as Prof. Judi Walker, the Chief Investigator, is away until the 30th September.

Enclosed are -

- Information Letters for Pharmacist Questionnaire and Student Questionnaire
- Copies of Letters to the Pharmacy Guild of Australia (Tasmanian Branch, Pharmaceutical Society of Australia (Tasmanian Branch) and the Pharmacy Board of Tasmania.

The researches assure the committee that all identifying sheets such as the consent forms will be kept separate to the questionnaires

Thankyou for your consideration.

Helen Howarth (candidate)

Dr. Roger Rumble (Supervisor)

4.3 PGA Approval Certificates

SURVEY CERTIFICATE

No: 371

THE PHARMACY GUILD OF AUSTRALIA

This is to certify that the documentation for the following survey has been presented for examination and that the Guild encourages member participation

CONDUCTED BY:	*UNIVERSITY OF TASMANIA*
FOR (CLIENT):	*UNIVERSITY OF TASMANIA*
PERIOD OF FIELD WORK:	*24 NOVEMBER – 31 JANUARY 1999*
METHOD OF SURVEY:	*VOLUNTARY POSTAL SURVEY*
STATES/AREAS TO BE COVERED:	*TASMANIA*

RATING: AAA

Signature of Approving Officer: ..... **Date:** *24 NOVEMBER 1998*

PLEASE NOTE: The Pharmacy Guild of Australia has examined the proposed questions to be asked in this survey and has given approval for members to be approached about the survey. Such approval does not obligate any pharmacist/ Guild member to participate in the survey. The choice of whether or not to participate is left to the individual.

SURVEY CERTIFICATE

No: 544

THE PHARMACY GUILD OF AUSTRALIA

This is to certify that the documentation for the following survey has been presented for examination and that the Guild encourages member participation

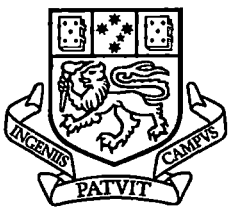
CONDUCTED BY:	*UNIVERSITY OF TASMANIA, DEPARTMENT OF RURAL HEALTH*
FOR (CLIENT):	*UNIVERSITY OF TASMANIA, DEPARTMENT OF RURAL HEALTH*
PERIOD OF FIELD WORK:	*OCTOBER - DECEMBER 2003*
METHOD OF SURVEY:	*POSTAL QUESTIONNAIRE*
STATES/AREAS TO BE COVERED:	*RURAL VICTORIA*

RATING: A1

Signature of Approving Officer: ..... **Date:** *13 October 2003*

PLEASE NOTE: The Pharmacy Guild of Australia has examined the proposed questions to be asked in this survey and has given approval for members to be approached about the survey. Such approval does not obligate any pharmacist/ Guild member to participate in the survey. The choice of whether or not to participate is left to the individual.

4.4 Letters Requesting Approval



UNIVERSITY OF TASMANIA

Faculty of Health Science
GPO Box 252-68
Hobart 7001

Faculty of Health Science
GPO Box 252-68
Hobart 7001

20 November 1998

Ms Jayne Wilson,
The Pharmacy Board of Tasmania
299 Macquarie Street,
Hobart Tas 7000

Dear Ms Wilson,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am is seeking the approval permission to use the Pharmacy Board of Tasmania's pharmacist address list and that of the Pharmacy Guild of Australia to conduct this questionnaire. I already have approval from the Tasmanian Branch of the Pharmaceutical Society of Australia and the Faculty of Health Science (Pharmacy).

The questionnaire also has received ethical approval from the University Ethics Committee (Human Experimentation). All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

I wish to send the pilot questionnaire out as soon as possible so the final questionnaire can be sent in January 1999.

Thankyou in anticipation of a favourable response

Helen Howarth
Masters of Medical Science Student
Phone: 6222 7209

Associate Professor Judi Walker
Supervisor
Phone: 6324 4011
Fax: 6324 4040

Faculty of Health Science
GPO Box 252-68
Hobart 7001

Faculty of Health Science
GPO Box 252-68
Hobart 7001

20 November 1998

Ms Louise Sullivan,
The Pharmacy Guild of Australia (Tasmanian Branch)
38 Montpelier Retreat,
Battery Point Tas 7004

Dear Ms Sullivan,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am is seeking the approval of the Pharmacy Guild of Australia to conduct this questionnaire and permission to use the Pharmacy Board of Tasmania's pharmacist address list. I already have approval from the Tasmanian Branch of the Pharmaceutical Society of Australia and the Faculty of Health Science (Pharmacy).

The questionnaire also has received ethical approval from the University Ethics Committee (Human Experimentation). All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

I wish to send the pilot questionnaire out as soon as possible so the final questionnaire can be sent in January 1999.

Thankyou in anticipation of a favourable response

Helen Howarth
Masters of Medical Science Student
Phone: 6222 7209

Associate Professor Judi Walker
Supervisor
Phone: 6324 4011
Fax: 6324 4040

UNIVERSITY OF TASMANIA

Faculty of Health Science
GPO Box 252-68
Hobart 7001

Faculty of Health Science
GPO Box 252-68
Hobart 7001

20 November 1998

Ms Jill Finch,
The Pharmacy Society of Australia (Tasmanian Branch)
191 Campbell Street,
Hobart Tas 7000

Dear Ms Finch,

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am is seeking the approval of the Pharmacy Society of Australia to conduct this questionnaire and permission to use the Pharmacy Board of Tasmania's pharmacist address list. I already have approval from the Tasmanian Branch of the Pharmacy Guild of Australia and the Faculty of Health Science (Pharmacy).

The questionnaire also has received ethical approval from the University Ethics Committee (Human Experimentation). All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

I wish to send the pilot questionnaire out as soon as possible so the final questionnaire can be sent in January 1999.

Thankyou in anticipation of a favourable response

Helen Howarth
Masters of Medical Science Student
Phone: 6222 7209

Associate Professor Judi Walker
Supervisor
Phone: 6324 4011
Fax: 6324 4040

UNIVERSITY
OF TASMANIA

University Department of
Rural Health

9 October, 2002

Ms Jayne Wilson,
The Pharmacy Board of Tasmania
299 Macquarie Street,
SOUTH HOBART TAS 7004

Dear Ms Wilson,

I wish to resubmit for approval to continue my research study first started in 1998 and to use the current pharmacist address list.

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am also seeking approval from the Pharmacy Guild of Australia (Tasmanian Branch) and the Pharmaceutical Society of Australia (Tasmanian Branch) to conduct this questionnaire.

The questionnaire also has received ethical approval from The Southern Tasmania Social Sciences Human Research Ethics Committee. All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

Thankyou in anticipation of a favourable response

Helen Howarth
Masters of Medical Science Student
Phone: 6226 2173

Professor Judi Walker
Supervisor
Phone: 6324 4000
Fax: 6324 4040

Locked Bag 1 – 372 Launceston
Tasmania Australia 7250
Telephone (03) 6324 4000
Facsimile (03) 6324 4040
Web ww.ruralhealth.utas.edu.au

UNIVERSITY
OF TASMANIA

University Department of
Rural Health
University Department of
Rural Health

9 October, 2002

Ms Lousie Sullivan
Branch Director
Pharmacy Guild of Australia (Tasmanian Branch)
PO Box 949
SANDY BAY TAS 7005

Dear Ms Sullivan,

I wish to resubmit for approval to continue my research study first started in 1998.

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am also seeking approval from the Pharmacy Board of Tasmania and the Pharmaceutical Society of Australia (Tasmanian Branch) to conduct this questionnaire.

The questionnaire also has received ethical approval from The Southern Tasmania Social Sciences Human Research Ethics Committee. All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

Thankyou in anticipation of a favourable response

Helen Howarth
Masters of Medical Science Student
Phone: 6226 2173

Professor Judi Walker
Supervisor
Phone: 6324 4000
Fax: 6324 4040

Locked Bag 1 – 372 Launceston
Tasmania Australia 7250
Telephone (03) 6324 4000
Facsimile (03) 6324 4040
Web www.ruralhealth.utas.edu.au

UNIVERSITY
OF TASMANIA

5th November, 2002

Ms Maria Cantillon
Branch Director,
Pharmaceutical Society of Australia (Tasmanian Branch)
161 Campbell St
HOBART TAS 7000

Dear Ms Cantillon,

I wish to resubmit for approval to continue my research study first started in 1998.

As pharmacists we contribute to healthy lifestyles by providing information every day in the normal course of our work. This questionnaire is investigating why pharmacists do, or do not participate in health promotion activities that may take place outside the pharmacy (or in those that may take place within the pharmacy when it is not open for business).

For this study, Health Promotion is defined as a multi-faceted approach to improving population health and is not limited to health education.

This voluntary questionnaire is part of a study to fulfil of the requirements of a master's degree in Medical Science. The title is 'Pharmacist Involvement in Health Promotion Activities: Facilitators and Barriers'

I am also seeking approval from the Pharmacy Board of Tasmania and the Pharmacy Guild of Australia (Tasmanian Branch) to conduct this questionnaire.

The questionnaire also has received ethical approval from The Southern Tasmania Social Sciences Human Research Ethics Committee. All replies will be anonymous. All data will be regarded as confidential and stored appropriately at the university.

Thankyou in anticipation of a favourable response

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Appendix 5: Geographical Areas of Survey

5.1 Background Information on Classification Systems in Australia

In 1996, 53.1% of Australia's population lived in cities of more than 500 000 inhabitants (Wilkinson & Blue 2002) but a formula was needed for resources allocation for the other areas of this country. A further 9.2% of the population lived in areas of 100 000 to 499 999 people while the remaining 38.7% lived in regions of fewer than 99 000 inhabitants. In Tasmania, half the population lives outside the capital city Hobart in centres ranging from the cities of Launceston, Devonport and Burnie to a number of smaller rural towns (Australian Bureau of Statistics (ABS) 2002). Classification of these population areas for social and resource allocation has been made using several different statistical approaches over the past years.

The Rural and Remote Metropolitan Areas Classification (RRMA), was developed in 1994 and is still used (Department of Primary Industries and Energy and Department of Human Services and Health 1994). In this system, population areas are divided as:

Metropolitan Areas (M)	Metropolitan Area 1:	Capital City	
	Metropolitan Area 2:	Populations over 100 000	
Non-Metropolitan Areas (R)	Rural Zone	Large Rural Centre 3:	Population 25 000 to 99 999
		Small Rural Centre 4:	Population 10 000 to 24 999
		Other Rural Centre 5:	Population less than 10 000
Non-Metropolitan Areas (Rem)	Remote Zone	Remote Centre 6:	Population of greater than 5 000
		Other Remote Area 7:	Population less than 5 000

The Accessibility/Remoteness Index of Australia (ARIA) (Geographical Information Systems Centre of Australia (GISCA) 2001), upon which the pharmacy specific system is based, divided Australia according to remoteness and accessibility to services. Developed by the GISCA (National Key Centre for Social Applications of Geographic Information System) in Adelaide, the divisions are:

Metropolitan	
Major Urban	Urban Areas with more than 100 000 inhabitants
Other Urban	Urban Areas with 1 000 to 99 999 inhabitants
Bounded Rural Locality	Rural Areas with 200 to 999 inhabitants

The other divisions are described as Rural Balance and Migratory.

Overlaid on this are the classifications of:

Highly Accessible:	Relatively unrestricted accessibility to a range of goods, services and social interaction.
Accessible:	Some restrictions
Moderately Accessible:	Restricted accessibility
Remote:	Very restricted accessibility
Very Remote:	Locationally disadvantaged, Very little accessibility

Examples of this classification can be seen in the maps of Australia (Appendix 5.2, p. 66), Tasmania (Appendix 5.3, p. 67) and Victoria (Appendix 5.5 p. 70). ARIA has now been updated to ARIA^{+} and ARIA^{++} (GISCA 2004).

SD (Statistical Divisions) and SLA (Statistical Local Areas) developed by the ABS, LGAs (Local Government Areas), and Postcodes (Postal Areas) again overlay the divisions explained above (ABS, 2001, 2003). Postcodes were supplied for the Victorian pharmacists and the areas selected using these and Local Government Areas. LGA areas included in this study are Tasmania (Appendix 5.4 p. 68) and Victoria (Appendix 5.6 p. 71).

To rank both the physical and professional accessibility of pharmacies in Australia, the PhARIA structure was developed (Geographical Information Systems Centre of

Australia (GISCA, 2001). Based on the ARIA system, pharmacies were classified as:

PhARIA 1	Highly accessible
PhARIA 2	Accessible
PhARIA 3	Accessible
PhARIA 4	Moderately accessible
PhARIA 5	Remote
PhARIA 6	Very remote

While nationally 81% of pharmacies are PhARIA 1, Tasmania only has 50% of its pharmacies in this group. In Tasmania those rated PhARIA 1 are in Hobart, Launceston and Devonport. However the Rural and Remote Pharmacy Workforce Development Program (RRPWDP) (Pharmacy Guild of Australia 2004) ruled that for some funding support programmes, all pharmacies outside Hobart were considered as rural. This makes about 60% of Tasmanian pharmacies rural (59.3% 80/135 in 2003) (The Pharmacy Board of Tasmania 2003). In Victoria, Melbourne as the capital city is rated PhARIA 1. Also rated PhARIA 1, in the study area are Geelong, Bendigo, and Shepperton, while Echuca and Seymour are classified PhARIA 3.

References

ABS—*see* Australian Bureau of Statistics

Australian Bureau of Statistics (ABS) 2001 *2001 Census of Population and Housing Geographic Area*, Accessed 16 September 2003, <http://www.abs.gov.auwebsitedbs/>

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Department of Primary Industries and Energy and Department of Human Services *Census* and Health 1994 *Rural, Remote and Metropolitan areas classification 1991 edition,* Australian Government Publishing Service, Canberra.

Geographical Information Systems Centre of Australia (GISCA) 2001 *Pharmacy Access/Remoteness Index of Australia (PhARIA) 2001/2, Adelaide,* viewed 9 December 2002, <http.//www.gisca.adelaide.edu.au/pharm/pharia/2001/pharia2001.html>

Geographical Information Systems Centre of Australia (GISCA) 2004 *About ARIA*$^{+}$ *(Accessibility/Remoteness Index of Australia,* Accessed 18 February 2004, <http.//www.gisca.adelaide.edu.au/products_services/ariav2.abouthtml>

GISCA—*see* Geographical Information Systems Centre of Australia.

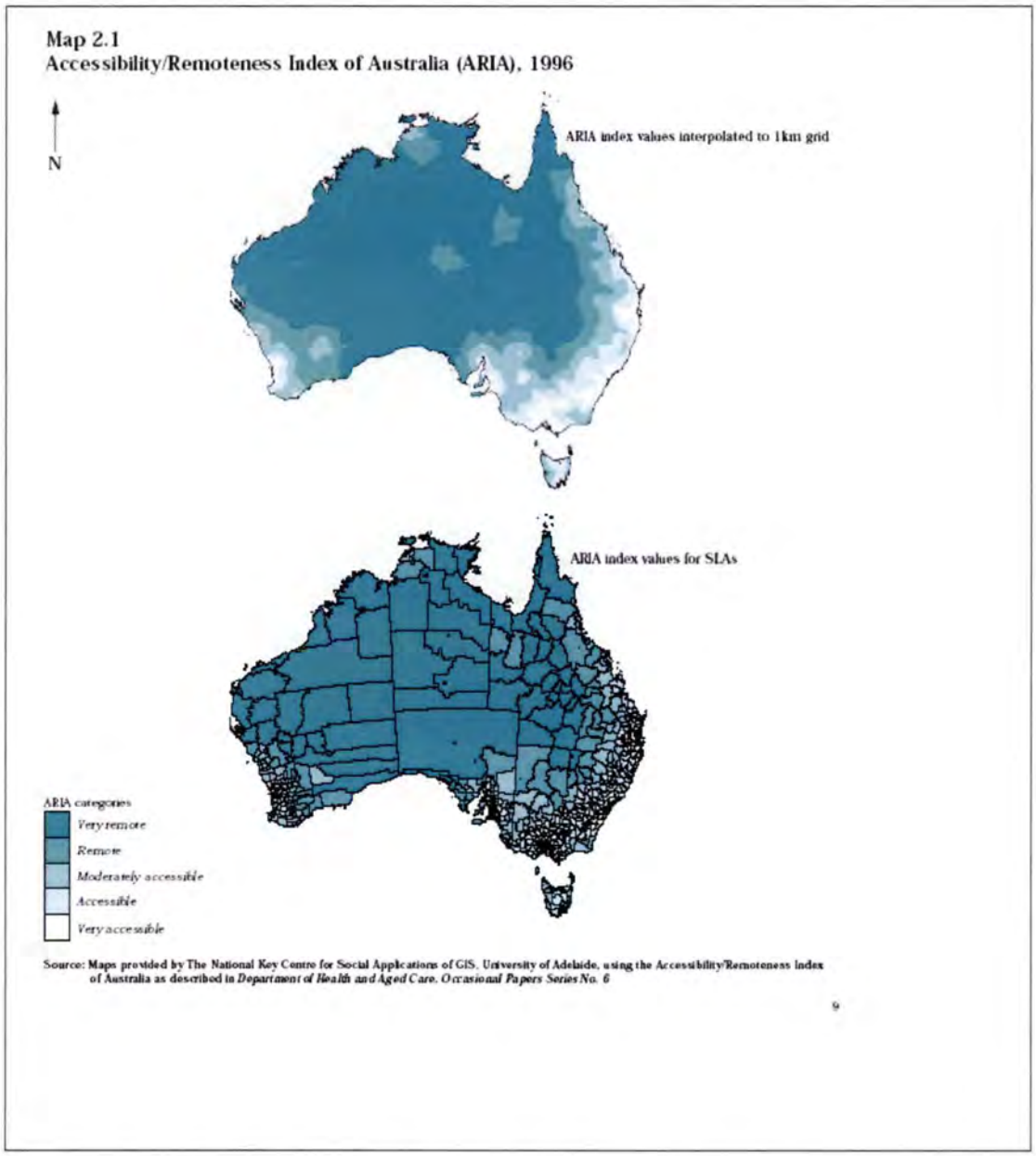
PGA—Pharmacy Guild of Australia.

Pharmacy Guild of Australia (PGA) 2004 *Pharmacy Rural and Remote Workforce Program*, Accessed 10 October 2004, <http://www.ruralpharamcy.com.au/about.asp>

The Pharmacy Board of Tasmania (2003) *Pharmacy Ownership in Tasmania*, Author, Hobart.

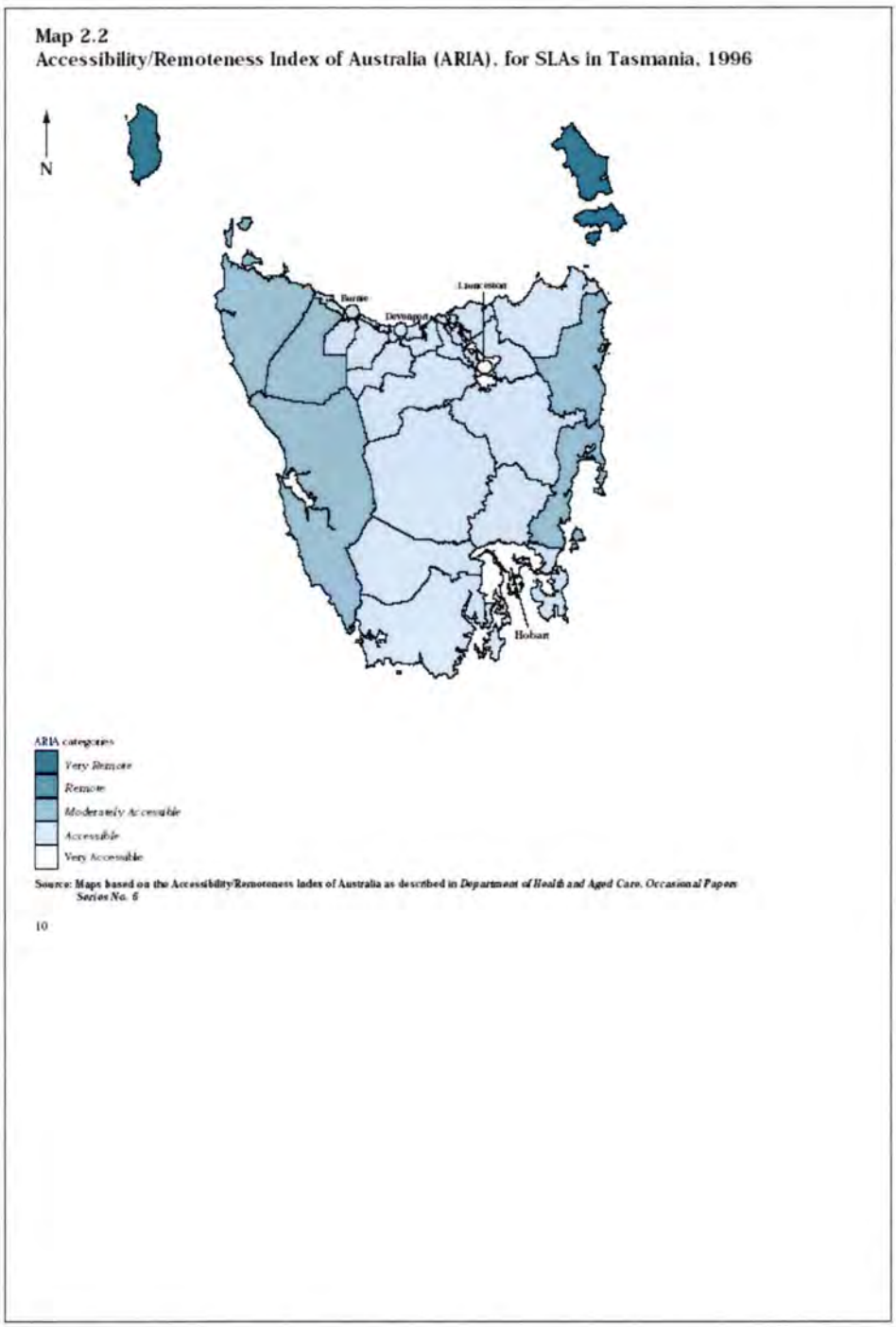
Wilkinson, D and Blue, I 2002 *The New Rural Health,* Oxford University Press, Mebourne.

5.2 ARIA Indices of Australia



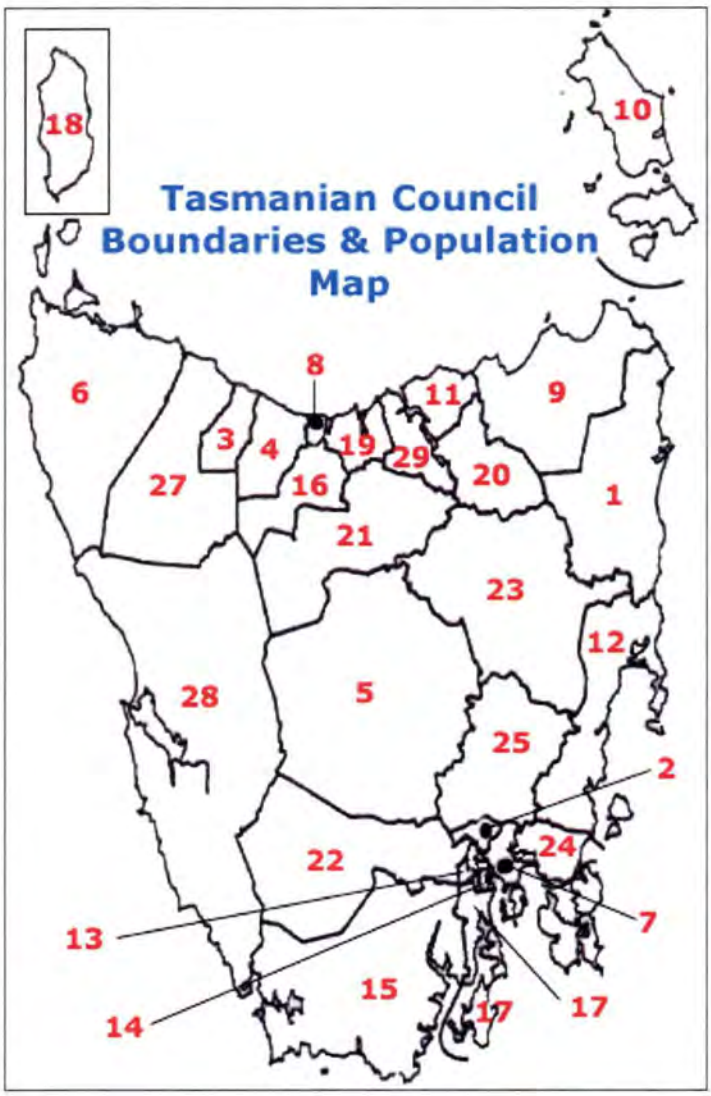
Public Health Information Development Unit 2004 *Accessibility/Remoteness Index of Australia (ARIA 1996,* Accessed: 22 September 2004, <www.publichealth.gov.au/pdf/atlas/tas/ch1_2_t.pdf>

5.3 ARIA Indices of Tasmania



Public health Information Development Unit *Accessibility/Remoteness Index of Australia (ARIA) for SLAs in Tasmania 1996,* Accessed: 22 September 2004, <www.publichealth.gov.au/pdf/atlas/tas/ch1_2_t.pdf>

5.4 Map of Tasmania with LGA Boundaries



Population statistics sourced from Australian Bureau of Statistics data 2001.

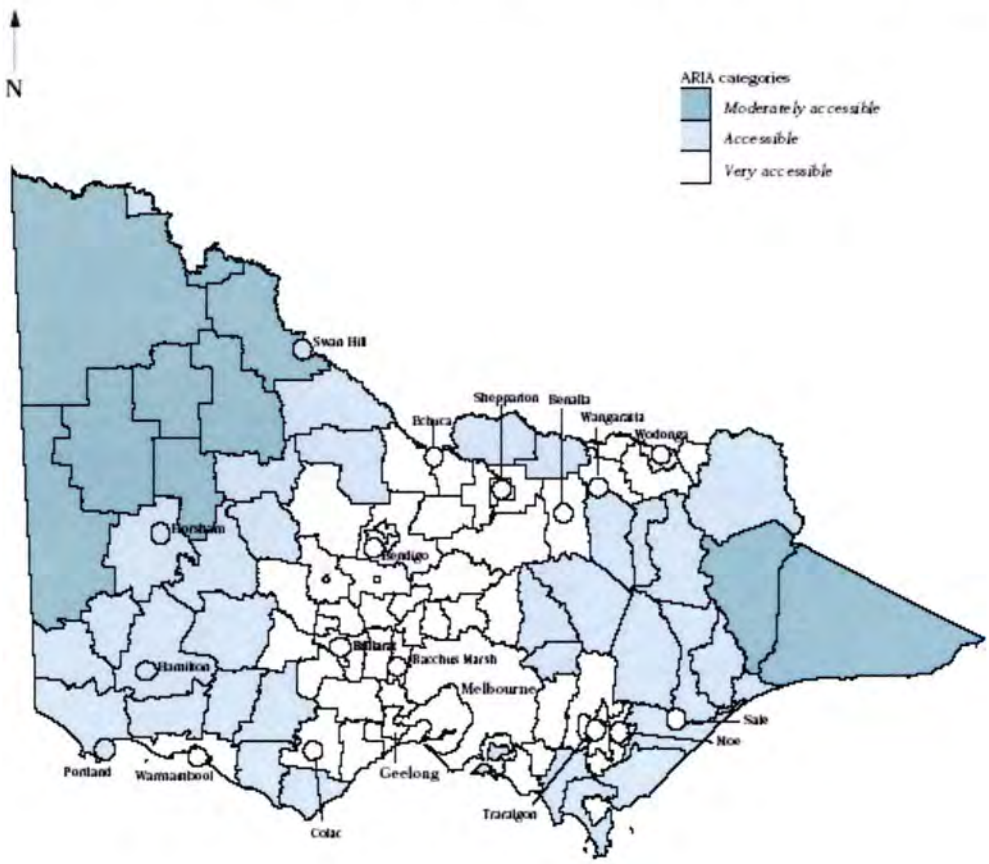
Council Name	Population	Map ref #
Break O'Day Council	5,752	1
Brighton Council	13,050	2
Burnie City Council	19,261	3
Central Coast Council	20,971	4
Central Highlands Council	2,488	5
Circular Head Council	8,480	6
Clarence City Council	48,965	7
Derwent Valley Council	9,743	22
Devonport City Council	24,334	8
Dorset Council	7,409	9
Flinders Council	940	10
George Town Council	6,728	11
Glamorgan/Spring Bay Council	4,248	12
Glenorchy City Council	43,748	13

Hobart City Council	45,954	14
Huon Valley Council	13,675	15
Kentish Council	5,505	16
Kingborough Council	28,582	17
King Island Council	1,755	18
Latrobe Council	8,165	19
Launceston City Council	62,682	20
Meander Valley Council	17,713	21
Northern Midlands Council	11,839	23
Sorell	10,941	24
Southern Midlands Council	5,640	25
Tasman Council	2,222	26
Waratah/Wynyard Council	13,819	27
West Coast Council	5,620	28
West Tamar Council	20,043	29

Local Government Association of Tasmania *Tasmanian Council Boundaries and Population Map Tasmania,* Accessed 18 October 2004, <http://www.lgat.tas.gov.au/councils/map/index.html>

5.5 ARIA Indices of Victoria

Map 2.2
Accessibility/Remoteness Index of Australia (ARIA), for SLAs in Victoria, 1996

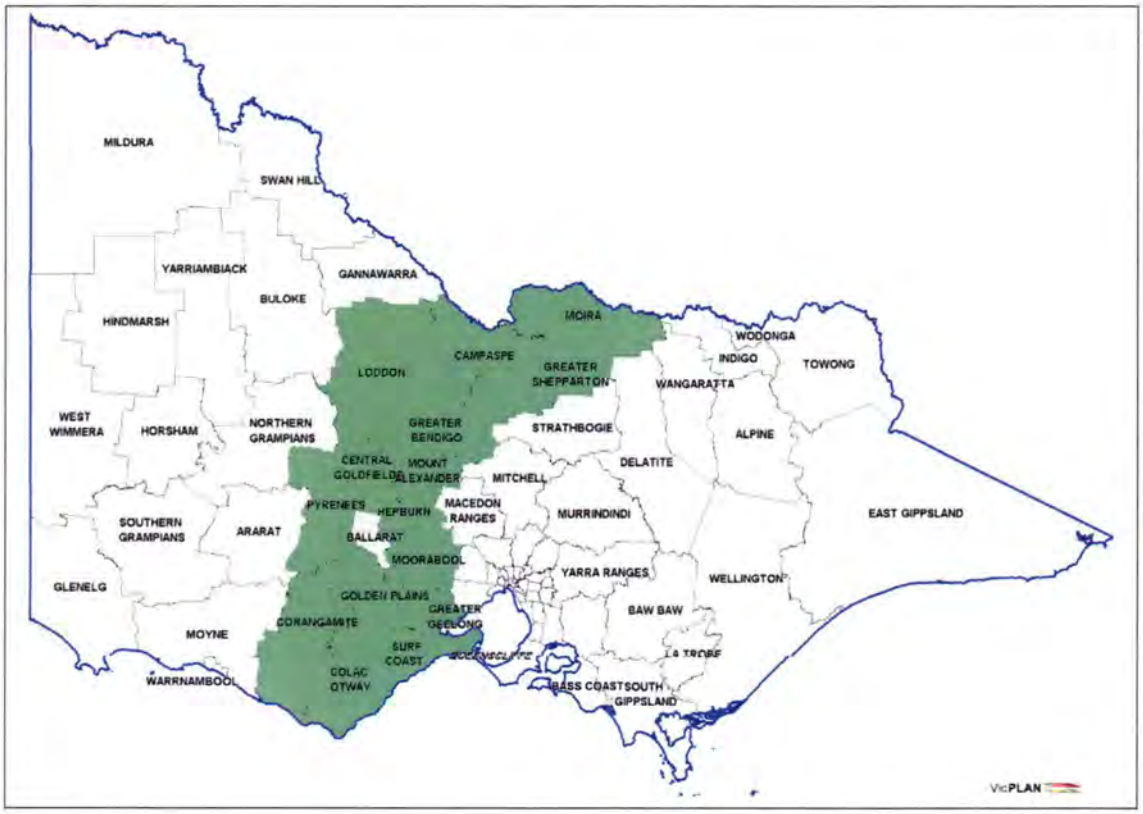


Source: Map based on the Accessibility/Remoteness Index of Australia as described in *Department of Health and Aged Care. Occasional Papers Series No. 6*

10

Public Health Information and Development Unit *Accessibility/Remoteness Index of Australia (ARIA) for SLAs in Victoria 1996,* Accessed 22 September 2004, <www.publichealth.gov.au/pdf/atlas/vic/ch1_2_v.pdf>

5.6 Map of Victoria with LGA Boundaries



The Local Government Areas used for the fifteen study areas were the divisions of Greater Geelong, Surf Coast, Golden Plains, Colac-Otway, Corangamite, Moorabool, Pyrenes, Hepburn, Greater Bendigo, Mt Alexander, Loddon, Central Goldfields, Campaspe, Greater Shepparton and Moira.

Department of the Environment 2004 *Map of Victoria with SLA Boundaries,* Accessed 18 October 2004, <http://www.doi.vic.gov.au/doi/doielect.nsf/2a6bd98dee287482ca256915001cff0c/5a223a57a2cb58baca256c4c00048ecc/$FILE/Print Map - Vic Rural.gif>

Appendix 6: Statistical Analysis

6.1 Reliability Analysis

Phase 1 Tasmanian Pharmacists 1999

Table A.6.1.1 Phase 1 Tasmanian Pharmacists 1999—Age

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	21-30	27	20.9	21.1	21.1
	31-40	39	30.2	30.5	51.6
	41-50	28	21.7	21.9	73.4
	51-60	21	16.3	16.4	89.8
	61-70	10	7.8	7.8	97.7
	Over 70	3	2.3	2.3	100.0
	Total	128	99.2	100.0	
Missing	System	1	0.8		
Total		129	100.0		

Table A.6.1.2 Phase 1 Tasmanian Pharmacists 1999—Gender

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Female	72	55.8	56.3	56.3
	Male	56	43.4	43.8	100.0
	Total	128	99.2	100.0	
Missing	System	1	0.8		
Total		129	100.0		

Table A.6.1.3 Phase 1 Tasmanian Pharmacists 1999—Major Work Place

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	106	82.2	82.2	82.2
	Hospital Pharmacy	18	14.0	14.0	96.1
	Education	1	0.8	0.8	96.9
	Government	1	0.8	0.8	97.7
	Other	1	0.8	0.8	98.4
	Not Working/Over-seas	2	1.6	1.6	100.0
	Total	129	100.0	100.0	

Table A.6.1.4 Phase 1 Tasmanian Pharmacists 1999—Second Major Workplace

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	3	2.3	25.0	25.0
	Hospital Pharmacy	3	2.3	25.0	50.0
	Education	3	2.3	25.0	75.0
	Research	2	1.6	16.7	91.7
	Other	1	0.8	8.3	100.0
	Total	12	9.3	100.0	
Missing	System	117	90.7		
Total		129	100.0		

Not all respondents nominated a second workplace.

Table A.6.1.5 Phase 1 Tasmanian Pharmacists 1999—Paid Hours per Week

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Nil	6	4.7	4.7	4.7
	Up to 15	13	10.1	10.2	14.8
	16-30	16	12.4	12.5	27.3
	31-40	35	27.1	27.3	54.7
	40 or More	58	45.0	45.3	100.0
	Total	128	99.2	100.0	
Missing	System	1	0.8		
Total		129	100.0		

Table A.6.1.6 Phase 1 Tasmanian Pharmacists 1999—Pharmacy Qualification

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Not Working/ Overseas/Return to Sender	1	0.8	0.8	.8
	Diploma/ Pharmaceutical Certificate	35	27.1	27.1	27.9
	B. App. Sci. (Pharm.)	11	8.5	8.5	36.4
	B. Pharm	82	63.6	63.6	100.0
	Total	129	100.0	100.0	

Table A.6.1.7 Phase 1 Tasmanian Pharmacists 1999—Additional Pharmacy Related Qualifications

Qualification	Frequency	Percent.
Honours/Masters/Doctorate	5	3.6
MBA/Other Business or Accounting Qualification	8	6.2
Training Certificate	5	3.8
SHPA Fellow	2	1.6
ACPP Membership	29	22.5
AACP Accreditation	9	7.0
Pharmacy Related Qualification	26	20.2
Studying Another Pharmacy Related Qualification	13	10.1

Percentage of total number of respondents (129)

Table A.6.1.8 Phase 1 Tasmanian Pharmacists 1999—Information—Speaker's Kits/Make Up Own/Both

a. Speaker's Kits

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	3	2.3	100.0	100.0
Missing	System	126	97.7		
Total		129	100.0		

b. Make Up Own

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Make Up Own	41	31.8	100.0	100.0
Missing	System	88	68.2		
Total		129	100.0		

c. Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Both	8	6.2	100.0	100.0
Missing	System	121	93.8		
Total		129	100.0		

Table A.6.1.9 Phase 1 Tasmanian Pharmacists 1999—Resources - Speaker's Kits/ Make Up Own/Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	2	1.6	4.7	4.7
	Make Up Own	35	27.1	81.4	86.0
	Both	6	4.7	14.0	100.0
	Total	43	33.3	100.0	
Missing	System	86	66.7		
Total		129	100.0		

Table A.6.1.10 Phase 1 Tasmanian Pharmacists 1999—Handouts

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	2	1.6	4.3	4.3
	Make Up Own	39	30.2	84.8	89.1
	Both	5	3.9	10.9	100.0
	Total	46	35.7	100.0	
Missing	System	83	64.3		
Total		129	100.0		

Table A.6.1.11 Phase 1: Tasmanian Pharmacists 1999—Community Development

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	19	14.7	63.3	63.3
	No	11	8.5	36.7	100.0
	Total	30	23.3	100.0	
Missing	System	99	76.7		
Total		129	100.0		

Table A.6.1.12 Phase 1 Tasmanian Pharmacists 1999—Payment

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	30	23.3	27.5	27.5
	No	41	31.8	37.6	65.1
	Out of Pockets	38	29.5	34.9	100.0
	Total	109	84.5	100.0	
Missing	System	20	15.5		
Total		129	100.0		

Table A.6.1.13 Phase 1 Tasmanian Pharmacists 1999—Suggested Charges

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	0	6	4.7	18.8	18.8
	20	3	2.3	9.4	28.1
	25	3	2.3	9.4	37.5
	30	8	6.2	25.0	62.5
	35	1	0.8	3.1	65.6
	45	1	0.8	3.1	68.8
	50	4	3.1	12.5	81.3
	60	1	0.8	3.1	84.4
	80	2	1.6	6.3	90.6
	125	1	0.8	3.1	93.8
	170	1	0.8	3.1	96.9
	200	1	0.8	3.1	100.0
	Total	32	24.8	100.0	
Missing	System	97	75.2		
Total		129	100.0		

Table A.6.1.14 Phase 1 Tasmanian Pharmacists 1999—Community Talks and Media—Actual Charges

a. Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	74	57.4	97.4	97.4
	$26-50	1	0.8	1.3	98.7
	$51-100	1	0.8	1.3	100.0
	Total	76	58.9	100.0	
Missing	System	53	41.1		
Total		129	100.0		

b. Media Charge

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	59	45.7	100.0	100.0
Missing	System	70	54.3		
Total		129	100.0		

Table A.6.1.15 Phase 1 Tasmanian Pharmacists 1999—Participation with Improved Skills and Presenting Skills Workshop

a. Participation with Improved Skills

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	67	51.9	63.8	63.8
	No	30	23.3	28.6	92.4
	Possibly	8	6.2	7.6	100.0
	Total	105	81.4	100.0	
Missing	System	24	18.6		
Total		129	100.0		

b. Presenting Skills Workshop Interest

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	74	57.4	64.3	64.3
	No	37	28.7	32.2	96.5
	Possibly	4	3.1	3.5	100.0
	Total	115	89.1	100.0	
Missing	System	14	10.9		
Total		129	100.0		

Table A.6.1.16 Phase 1a Pharmacy Students 1999—Age

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	17-21	19	34.5	34.5	34.5
	21-30	35	63.6	63.6	98.2
	31-40	1	1.8	1.8	100.0
	Total	55	100.0	100.0	

Table A.6.1.17 Phase 1a Pharmacy Students 1999—Gender

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Female	38	69.1	69.1	69.1
	Male	17	30.9	30.9	100.0
	Total	55	100.0	100.0	

Table A.6.1.18 Phase 1a Pharmacy Students 1999—Additional Pharmacy Related Qualification

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Qualification - Pharmacy related	5	9.1	100.0	100.0
Missing	System	50	90.9		
Total		55	100.0		

Table A.6.1.19 Phase 1a Pharmacy Students 1999—Potential Major Work Place

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	36	65.5	66.7	66.7
	Hospital Pharmacy	15	27.3	27.8	94.4
	Research	2	3.6	3.7	98.1
	Other	1	1.8	1.9	100.0
	Total	54	98.2	100.0	
Missing	System	1	1.8		
Total		55	100.0		

Table A.6.1.20 Phase 1a Pharmacy Students 1999— Potential Second Major Work Place

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	6	10.9	18.8	18.8
	Hospital Pharmacy	20	36.4	62.5	81.3
	Education	3	5.5	9.4	90.6
	Research	2	3.6	6.3	96.9
	Other	1	1.8	3.1	100.0
	Total	32	58.2	100.0	
Missing	System	23	41.8		
Total		55	100.0		

Not all respondents nominated a second workplace.

Table A.6.1.21 Phase 1a Pharmacy Students 1999—Community Development

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	48	87.3	87.3	87.3
	No	4	7.3	7.3	94.5
	Already Doing This	3	5.5	5.5	100.0
	Total	55	100.0	100.0	

Table A.6.1.22 Phase 1a Pharmacy Students 1999—Payment

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	34	61.8	65.4	65.4
	No	3	5.5	5.8	71.2
	Out of Pockets Only	14	25.5	26.9	98.1
	Possibly	1	1.8	1.9	100.0
	Total	52	94.5	100.0	
Missing	System	3	5.5		
Total		55	100.0		

Table A.6.1.23 Phase 1a Pharmacy Students 1999—Potential Payment for Community Talks and Media Presentations

a. Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	35	63.6	66.0	66.0
	Less than $25	4	7.3	7.5	73.6
	$26-50	5	9.1	9.4	83.0
	$51-100	1	1.8	1.9	84.9
	$101-200	1	1.8	1.9	86.8
	Possibly/Unable to Say	7	12.7	13.2	100.0
	Total	53	96.4	100.0	
Missing	System	2	3.6		
Total		55	100.0		

b. Media Presentations

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	30	54.5	58.8	58.8
	Less than $25	1	1.8	2.0	60.8
	$26-50	5	9.1	9.8	70.6
	$51-100	1	1.8	2.0	72.5
	$101-200	2	3.6	3.9	76.5
	More	2	3.6	3.9	80.4
	Possibly/Unable to Say	10	18.2	19.6	100.0
	Total	51	92.7	100.0	
Missing	System	4	7.3		
Total		55	100.0		

Table A.6.1.24 Phase 1a Pharmacy Students 1999—Participation with Improved Skills

a. Participation with Improved Skills

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	49	89.1	92.5	92.5
	No	4	7.3	7.5	100.0
	Total	53	96.4	100.0	
Missing	System	2	3.6		
Total		55	100.0		

b. Presenting Skills Workshop

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	46	83.6	85.2	85.2
	No	8	14.5	14.8	100.0
	Total	54	98.2	100.0	
Missing	System	1	1.8		
Total		55	100.0		

Phase 2: Tasmanian Pharmacists 2002

Table A.6.1.25 Phase 2 Tasmanian Pharmacists 2002—Age

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	21-30	24	15.7	15.9	15.9
	31-40	35	22.9	23.2	39.1
	41-50	43	28.1	28.5	67.5
	51-60	24	15.7	15.9	83.4
	61-70	21	13.7	13.9	97.4
	Over 70	4	2.6	2.6	100.0
	Total	151	98.7	100.0	
Missing	System	2	1.3		
Total		153	100.0		

Table A.6.1.26 Phase 2 Tasmanian Pharmacists 2002—Gender

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Female	83	54.2	55.0	55.0
	Male	68	44.4	45.0	100.0
	Total	151	98.7	100.0	
Missing	System	2	1.3		
Total		153	100.0		

Table A.6.1.27 Phase 2 Tasmanian Pharmacists 2002—Major Work Place

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Community Pharmacy	122	79.7	79.7	79.7
	Hospital Pharmacy	19	12.4	12.4	92.2
	Research	3	2.0	2.0	94.1
	Government	4	2.6	2.6	96.7
	Other	2	1.3	1.3	98.0
	Not Working/ Overseas	2	1.3	1.3	99.3
	Return to Sender	1	0.7	0.7	100.0
	Total	153	100.0	100.0	

Table A.6.1.28 Phase 2 Tasmanian Pharmacists 2002—Second Major Workplace

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	7	4.6	53.8	53.8
	Hospital Pharmacy	1	0.7	7.7	61.5
	Education	3	2.0	23.1	84.6
	Research	1	0.7	7.7	92.3
	Government	1	0.7	7.7	100.0
	Total	13	8.5	100.0	
Missing	System	140	91.5		
Total		153	100.0		

Not all respondents nominated a second workplace.

Table A.6.1.29 Phase 2 Tasmanian Pharmacists 2002—Paid Hours per Week

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Nil	6	3.9	4.0	4.0
	Up to 15	20	13.1	13.3	17.3
	16-30	22	14.4	14.7	32.0
	31-40	41	26.8	27.3	59.3
	40 or More	61	39.9	40.7	100.0
	Total	150	98.0	100.0	
Missing	System	3	2.0		
Total		153	100.0		

Table A.6.1.30 Phase 2 Tasmanian Pharmacists 2002—Pharmacy Qualification

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Diploma/ Pharmaceutical Certificate	43	28.1	28.9	28.9
	B. App. Sci. (Pharm.)	13	8.5	8.7	37.6
	B. Pharm	93	60.8	62.4	100.0
	Total	149	97.4	100.0	
Missing	System	4	2.6		
Total		153	100.0		

Table A.6.1.31 Phase 2 Tasmanian Pharmacists 2002—Additional Pharmacy Related Qualifications

Qualification	Frequency	Percent.
Honours/Masters/Doctorate	6	3.9
MBA/Other Business or Accounting Qualification	10	6.5
Training Certificate	1	0.7
SHPA Fellow	3	2.0
ACPP Membership	33	21.6
AACP Accreditation	13	8.5
Pharmacy Related Qualification	23	15
Studying Another Pharmacy Related Qualification	19	12.4

Percentage of total number of respondents (153)

Table A.6.1.32 Phase 2 Tasmanian Pharmacists 2002 Information—Speaker's Kits/Make up Own/Both

a. Speaker's Kits

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	1	0.7	100.0	100.0
Missing	System	152	99.3		
Total		153	100.0		

b. Make Up Own

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Make Up Own	52	34.0	100.0	100.0
Missing	System	101	66.0		
Total		153	100.0		

c. Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Both	16	10.5	100.0	100.0
Missing	System	137	89.5		
Total		153	100.0		

Table A.6.1.33 Phase 2 Tasmanian Pharmacists 2002 Resources—Speaker's Kits/Make up Own/Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	3	2.0	5.9	5.9
	Make Up Own	39	25.5	76.5	82.4
	Both	9	5.9	17.6	100.0
	Total	51	33.3	100.0	
Missing	System	102	66.7		
Total		153	100.0		

Table A.6.1.34 Phase 2 Tasmanian Pharmacists 2002 Handouts—Speaker's Kits/Make up Own/Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	4	2.6	7.3	7.3
	Make Up Own	42	27.5	76.4	83.6
	Both	9	5.9	16.4	100.0
	Total	55	35.9	100.0	
Missing	System	98	64.1		
Total		153	100.0		

Table A.6.1.35 Phase 2 Tasmanian Pharmacists 2002—Community Development

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	22	14.4	59.5	59.5
	No	15	9.8	40.5	100.0
	Total	37	24.2	100.0	
Missing	System	116	75.8		
Total		153	100.0		

Table A.6.1.36 Phase 2 Tasmanian Pharmacists 2002—Payment

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	49	32.0	35.5	35.5
	No	46	30.1	33.3	68.8
	Out of Pockets	40	26.1	29.0	97.8
	Possible/Not Sure	3	2.0	2.2	100.0
	Total	138	90.2	100.0	
Missing	System	15	9.8		
Total		153	100.0		

Table A.6.1.37 Phase 2 Tasmanian Pharmacists 2002—Charges

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	0	4	2.6	10.5	10.5
	10	1	0.7	2.6	13.2
	20	1	0.7	2.6	15.8
	30	13	8.5	34.2	50.0
	35	4	2.6	10.5	60.5
	40	4	2.6	10.5	71.1
	45	1	0.7	2.6	73.7
	50	3	2.0	7.9	81.6
	60	1	0.7	2.6	84.2
	70	1	0.7	2.6	86.8
	85	1	0.7	2.6	89.5
	100	2	1.3	5.3	94.7
	150	2	1.3	5.3	100.0
	Total	38	24.8	100.0	
Missing	System	115	75.2		
Total		153	100.0		

Table A.6.1.38 Phase 2 Tasmanian Pharmacists 2002—Community Talks and Media—Actual Charges

a. Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	94	61.4	94.9	94.9
	Less than $25	1	0.7	1.0	96.0
	$26-50	2	1.3	2.0	98.0
	$51-100	1	0.7	1.0	99.0
	Out of Pockets	1	0.7	1.0	100.0
	Total	99	64.7	100.0	
Missing	System	54	35.3		
Total		153	100.0		

b. Media Charge

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	75	49.0	94.9	94.9
	$26-50	2	1.3	2.5	97.5
	Out of Pockets	2	1.3	2.5	100.0
	Total	79	51.6	100.0	
Missing	System	74	48.4		
Total		153	100.0		

Table A.6.1.39 Phase 2 Tasmanian Pharmacists 2002—Participation with Improved Skills and Presenting Skills Workshop

a. Participation with Improved Skills

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	82	53.6	63.6	63.6
	No	44	28.8	34.1	97.7
	Possibly	3	2.0	2.3	100.0
	Total	129	84.3	100.0	
Missing	System	24	15.7		
Total		153	100.0		

b. Presenting Skills Workshop Interest

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	86	56.2	59.7	59.7
	No	54	35.3	37.5	97.2
	Possibly	4	2.6	2.8	100.0
	Total	144	94.1	100.0	
Missing	System	9	5.9		
Total		153	100.0		

Table A.6.1.40 Phase 3 Victorian Pharmacists 2003—Age

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	21-30	11	9.1	10.4	10.4
	31-40	19	15.7	17.9	28.3
	41-50	28	23.1	26.4	54.7
	51-60	32	26.4	30.2	84.9
	61-70	14	11.6	13.2	98.1
	Over 70	2	1.7	1.9	100.0
	Total	106	87.6	100.0	
Missing	System	15	12.4		
Total		121	100.0		

Table A.6.1.41 Phase 3 Victorian Pharmacists 2003—Gender

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Female	57	47.1	53.8	53.8
	Male	49	40.5	46.2	100.0
	Total	106	87.6	100.0	
Missing	System	15	12.4		
Total		121	100.0		

Table A.6.1.42 Phase 3 Victorian Pharmacists 2003—Major Work Place

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Not Working/Over-seas/Return to Sender	17	14.0	14.0	14.0
	Community Pharmacy	87	71.9	71.9	86.0
	Hospital Pharmacy	16	13.2	13.2	99.2
	Research	1	.8	.8	100.0
	Total	121	100.0	100.0	

Table A.6.1.43 Phase 3 Victorian Pharmacists 2003—Second Major Work Place

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Community Pharmacy	3	2.5	33.3	33.3
	Hospital Pharmacy	3	2.5	33.3	66.7
	Education	3	2.5	33.3	100.0
	Total	9	7.4	100.0	
Missing	System	112	92.6		
Total		121	100.0		

Table A.6.1.44 Phase 3 Victorian Pharmacists 2003—Pharmacy Qualification

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Not Working/ Overseas/Return to Sender	15	12.4	12.4	12.4
	Diploma/ Pharmaceutical Certificate	22	18.2	18.2	30.6
	B. App. Sci. (Pharm.)	1	0.8	.8	31.4
	B. Pharm	83	68.6	68.6	100.0
	Total	121	100.0	100.0	

Table A.6.1.45 Phase 3 Victorian Pharmacists 2003—Additional Pharmcy Related Qualifications

Qualification	Frequency	Percent.
Honours/Masters/Doctorate	12	9.9
MBA/Other Business or Accounting Qualification	2	1.7
Training Certificate	3	2.5
SHPA Fellow	2	1.7
ACPP Membership	29	24.0
AACP Accreditation	19	15.7
Pharmacy Related Qualification	18	14.9
Studying Another Pharmacy Related Qualification	8	6.6

Percentage of total number of respondents (121)

Table A.6.1.46 Phase 3 Victorian Pharmacists 2003—Paid Hours per Week

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Nil	7	5.8	6.6	6.6
	Up to 15	9	7.4	8.5	15.1
	16-30	22	18.2	20.8	35.8
	31-40	32	26.4	30.2	66.0
	40 or More	36	29.8	34.0	100.0
	Total	106	87.6	100.0	
Missing	System	15	12.4		
Total		121	100.0		

Table A.6.1.47 Phase 3 Victorian Pharmacists 2003—Information - Speaker's Kits/ Make up Own/Both

a. Speaker's Kits

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	6	5.0	100.0	100.0
Missing	System	115	95.0		
Total		121	100.0		

b. Make Up Own

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Make Up Own	40	33.1	100.0	100.0
Missing	System	81	66.9		
Total		121	100.0		

c. Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Both	17	14.0	100.0	100.0
Missing	System	104	86.0		
Total		121	100.0		

Table A.6.1.48 Phase 3 Victorian Pharmacists 2003—Resources - Speaker's Kits/ Make up Own/Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	5	4.1	13.2	13.2
	Make Up Own	31	25.6	81.6	94.7
	Both	2	1.7	5.3	100.0
	Total	38	31.4	100.0	
Missing	System	83	68.6		
Total		121	100.0		

Table A.6.1.49 Phase 3 Victorian Pharmacists 2003—Handouts—Speaker's Kits/ Make up Own/Both

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Speaker's Kits	5	4.1	12.2	12.2
	Make Up Own	31	25.6	75.6	87.8
	Both	5	4.1	12.2	100.0
	Total	41	33.9	100.0	
Missing	System	80	66.1		
Total		121	100.0		

Table A.6.1.50 Phase 3 Victorian Pharmacists 2003—Community Development

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	16	13.2	64.0	64.0
	No	9	7.4	36.0	100.0
	Total	25	20.7	100.0	
Missing	System	96	79.3		
Total		121	100.0		

Table A.6.1.51 Phase 3 Victorian Pharmacists 2003—Payment

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	30	24.8	34.9	34.9
	No	33	27.3	38.4	73.3
	Out of Pockets Only	23	19.0	26.7	100.0
	Total	86	71.1	100.0	
Missing	System	35	28.9		
Total		121	100.0		

Table A.6.1.52 Phase 3 Victorian Pharmacists 2003—Suggested Charges

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	0	3	2.5	18.8	18.8
	30	3	2.5	18.8	37.5
	35	1	0.8	6.3	43.8
	40	1	0.8	6.3	50.0
	45	1	0.8	6.3	56.3
	50	2	1.7	12.5	68.8
	60	1	0.8	6.3	75.0
	100	2	1.7	12.5	87.5
	250	2	1.7	12.5	100.0
	Total	16	13.2	100.0	
Missing	System	105	86.8		
Total		121	100.0		

Table A.6.1.53 Phase 3: Victorian Pharmacists 2003—Community Talks and Media—Actual Charges

a. Community Talks

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	68	56.2	94.4	94.4
	$26-50	3	2.5	4.2	98.6
	Possibly/Unable to Say	1	0.8	1.4	100.0
	Total	72	59.5	100.0	
Missing	System	49	40.5		
Total		121	100.0		

b. Media Charge

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	No	54	44.6	94.7	94.7
	$26-50	1	0.8	1.8	96.5
	$101-200	1	0.8	1.8	98.2
	Possibly/Unable to Say	1	0.8	1.8	100.0
	Total	57	47.1	100.0	
Missing	System	64	52.9		
Total		121	100.0		

Table A.6.1.54 Phase 3 Victorian Pharmacists 2003—Participation with Improved Skills and Presenting Skills Workshop

a. Presenting Skills Workshop

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	57	47.1	68.7	68.7
	No	26	21.5	31.3	100.0
	Total	83	68.6	100.0	
Missing	System	38	31.4		
Total		121	100.0		

b. Presenting Skills Workshop Interest

		Frequency	Percent.	Valid Percent.	Cumulative Percent.
Valid	Yes	50	41.3	50.5	50.5
	No	49	40.5	49.5	100.0
	Total	99	81.8	100.0	
Missing	System	22	18.2		
Total		121	100.0		

Comparison Tables

Numbers do not correlate as not all participants answered all questions.

Table A.6.1.55 Phase 1, 2 and 3 All Pharmacist Surveys—Work Area and Community Talks, Newsletters and Media Presentations Crosstabulation—Area of Practice Rural Adjusted Phase 2

a. Community Talks

State Surveyed			Community Talks		Total
			Yes	No	
Tasmanian Survey 1999	Area of Practice	Capital City	9	34	43
		Urban Area	21	30	51
		Rural Area	15	12	27
		Combination	1	4	5
	Total		46	80	126
Tasmanian Survey 2002	Area of Practice Rural Adjusted	Capital City	19	35	54
		Urban Area	4	19	23
		Rural Area	40	28	68
		Combination	0	4	4
	Total		63	86	149
Victorian Survey 2003	Area of Practice	Not Working/Overseas/ Returned to Sender	0	1	1
		Capital City	1	0	1
		Urban Area	12	24	36
		Rural Area	36	31	67
		Combination	0	1	1
	Total		49	57	106

b. Newsletters

State Surveyed			Newsletters		Total
			Yes	No	
Tasmanian Survey 1999	Area of Practice	Capital City	8	30	38
		Urban Area	11	36	47
		Rural Area	8	18	26
		Combination	2	2	4
	Total		29	86	115
Tasmanian Survey 2002	Area of Practice Rural Adjusted	Capital City	8	42	50
		Urban Area	0	21	21
		Rural Area	15	50	65
		Combination	0	2	2
	Total		23	115	138
Victorian Survey 2003	Area of Practice	Not Working/Overseas/ Returned to Sender	0	1	1
		Capital City	0	1	1
		Urban Area	9	24	33
		Rural Area	14	48	62
		Combination	0	1	1
	Total		23	75	98

c. Media Presentations

State Surveyed			Media presentations		Total
			Yes	No	
Tasmanian Survey 1999	Area of Practice	Capital City	2	40	42
		Urban Area	7	43	50
		Rural Area	4	22	26
		Combination	0	5	5
	Total		13	110	123
Tasmanian Survey 2002	Area of Practice Rural Adjusted	Capital City	1	53	54
		Urban Area	1	21	22
		Rural Area	3	62	65
		Combination	0	4	4
	Total		5	140	145
Victorian Survey 2003	Area of Practice	Not Working/Overseas/ Returned to Sender	0	1	1
		Capital City	0	1	1
		Urban Area	4	32	36
		Rural Area	6	60	66
		Combination	0	1	1
	Total		10	95	105

Table A.6.1.56 Phase 1, 2 and 3 All Pharmacist Surveys—Paid Hours Per Week/ Talks, Newsletters and Media Presentations Crosstabulation

a. Community Talks

State Surveyed			Community Talks		Total
			Yes	No	
Tasmanian Survey 1999	Paid Hours Per Week	Nil	1	5	6
		Up to 15	4	9	13
		16-30	2	14	16
		31-40	15	20	35
		40 or More	25	32	57
	Total		47	80	127
Tasmanian Survey 2002	Paid Hours Per Week	Nil	3	3	6
		Up to 15	3	17	20
		16-30	11	11	22
		31-40	17	24	41
		40 or More	30	31	61
	Total		64	86	150
Victorian Survey 2003	Paid Hours Per Week	Nil	3	4	7
		Up to 15	2	7	9
		16-30	8	14	22
		31-40	15	17	32
		40 or More	21	15	36
	Total		49	57	106

b. Newsletters

State Surveyed			Newsletters		Total
			Yes	No	
Tasmanian Survey 1999	Paid Hours Per Week	Nil	0	5	5
		Up to 15	3	10	13
		16-30	1	14	15
		31-40	12	21	33
		40 or More	13	37	50
	Total		29	87	116
Tasmanian Survey 2002	Paid Hours Per Week	Nil	0	5	5
		Up to 15	0	16	16
		16-30	6	14	20
		31-40	5	34	39
		40 or More	12	46	58
	Total		23	115	138
Victorian Survey 2003	Paid Hours Per Week	Nil	1	6	7
		Up to 15	0	8	8
		16-30	3	17	20
		31-40	12	17	29
		40 or More	7	27	34
	Total		23	75	98

c. Media Presentations

State Surveyed			Media Presentations		Total
			Yes	No	
Tasmanian Survey 1999	Paid Hours Per Week	Nil	0	6	6
		Up to 15	2	11	13
		16-30	0	16	16
		31-40	3	31	34
		40 or More	8	47	55
	Total		13	111	124
Tasmanian Survey 2002	Paid Hours Per Week	Nil	0	5	5
		Up to 15	0	20	20
		16-30	0	20	20
		31-40	2	38	40
		40 or More	3	57	60
	Total		5	140	145
Victorian Survey 2003	Paid Hours Per Week	Nil	1	6	7
		Up to 15	0	9	9
		16-30	1	21	22
		31-40	4	27	31
		40 or More	4	32	36
	Total		10	95	105

Table A.6.1.57 Phase 1, 2 and 3 All Pharmacist Surveys—Work Age/ Talks, Newsletters and Media Presentations Crosstabulation

a. Community Talks

State Surveyed			Community Talks		Total
			Yes	No	
Tasmanian Survey 1999	Age	21-30	9	18	27
		31-40	16	22	38
		41-50	14	14	28
		51-60	6	15	21
		61-70	2	8	10
		Over 70	0	3	3
	Total		47	80	127
Tasmanian Survey 2002	Age	21-30	8	16	24
		31-40	17	18	35
		41-50	27	16	43
		51-60	7	17	24
		61-70	4	17	21
		Over 70	1	3	4
	Total		64	87	151
Victorian Survey 2003	Age	21-30	5	6	11
		31-40	10	9	19
		41-50	16	12	28
		51-60	13	19	32
		61-70	5	9	14
		Over 70	0	2	2
	Total		49	57	106

b. Newsletters

State Surveyed			Newsletters		Total
			Yes	No	
Tasmanian Survey 1999	Age	21-30	6	19	25
		31-40	12	24	36
		41-50	5	21	26
		51-60	5	13	18
		61-70	1	8	9
		Over 70	0	2	2
	Total		29	87	116
Tasmanian Survey 2002	Age	21-30	4	16	20
		31-40	6	27	33
		41-50	10	32	42
		51-60	2	20	22
		61-70	0	19	19
		Over 70	1	2	3
	Total		23	116	139
Victorian Survey 2003	Age	21-30	2	9	11
		31-40	4	13	17
		41-50	7	20	27
		51-60	5	23	28
		61-70	5	8	13
		Over 70	0	2	2
	Total		23	75	98

c. Media Presentations

State Surveyed			Media presentations		Total
			Yes	No	
Tasmanian Survey 1999	Age	21-30	3	24	27
		31-40	5	32	37
		41-50	1	26	27
		51-60	4	16	20
		61-70	0	10	10
		Over 70	0	3	3
	Total		13	111	124
Tasmanian Survey 2002	Age	21-30	0	23	23
		31-40	3	31	34
		41-50	1	40	41
		51-60	1	23	24
		61-70	0	21	21
		Over 70	0	3	3
	Total		5	141	146
Victorian Survey 2003	Age	21-30	1	10	11
		31-40	1	18	19
		41-50	5	22	27
		51-60	0	32	32
		61-70	3	11	14
		Over 70	0	2	2
	Total		10	95	105

Table A.6.1.58 Phase 1, 2 and 3 All Pharmacist Surveys—Gender/ Talks, Newsletters and Media Presentations Crosstabulation

a. Community Talks

State Surveyed			Community Talks		Total
			Yes	No	
Tasmanian Survey 1999	Gender	Female	26	46	72
		Male	21	34	55
	Total		47	80	127
Tasmanian Survey 2002	Gender	Female	35	48	83
		Male	29	39	68
	Total		64	87	151
Victorian Survey 2003	Gender	Female	24	33	57
		Male	25	24	49
	Total		49	57	106

b. Newsletters

State Surveyed			Newsletters		Total
			Yes	No	
Tasmanian Survey 1999	Gender	Female	17	49	66
		Male	12	38	50
	Total		29	87	116
Tasmanian Survey 2002	Gender	Female	10	65	75
		Male	13	51	64
	Total		23	116	139
Victorian Survey 2003	Gender	Female	14	40	54
		Male	9	35	44
	Total		23	75	98

c. Media Presentations

State Surveyed			Media Presentations		Total
			Yes	No	
Tasmanian Survey 1999	Gender	Female	8	63	71
		Male	5	48	53
	Total		13	111	124
Tasmanian Survey 2002	Gender	Female	3	77	80
		Male	2	64	66
	Total		5	141	146
Victorian Survey 2003	Gender	Female	5	51	56
		Male	5	44	49
	Total		10	95	105

Table A.6.1.59 Phase 1 Tasmanian 1999—Case Processing Summary with Paid Hours of Work/Week * Gender Crosstabulation

a. Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent.	N	Percent.	N	Percent.
Paid Hours of Work/Week * Gender	128	99.2%	1	.8%	129	100.0%

b. Paid Hours of Work/Week * Gender Crosstabulation

		Gender		Total
		Female	Male	
Paid Hours of Work/Week	Nil	4	2	6
	Up to 15	9	4	13
	16-30	12	4	16
	31-40	25	10	35
	40 or More	22	36	58
Total		72	56	128

Mean: Female: 31-40 hours, Male: 40 or more hours

Table A.6.1.60 Phase 2 Tasmania 2002—Case Processing Summary with Paid Hours of Work/Week * Gender Crosstabulation

a. Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent.	N	Percent.	N	Percent.
Paid Hours of Work/Week * Gender	150	98.0%	3	2.0%	153	100.0%

b. Paid Hours of Work/Week * Gender Crosstabulation

		Gender		Total
		Female	Male	
Paid Hours of Work/Week	Nil	2	4	6
	Up to 15	14	6	20
	16-30	18	4	22
	31-40	25	16	41
	40 or More	24	37	61
Total		83	67	150

Mean: Female: 31-40 hours, Male: 40 or more hours

Table A.6.1.61 Phase 3 Victoria 2003—Case Processing Summary with Paid Hours of Work/Week * Gender Crosstabulation

a. Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent.	N	Percent.	N	Percent.
Paid Hours of Work/Week * Gender	106	87.6%	15	12.4%	121	100.0%

b. Paid Hours of Work/Week * Gender Crosstabulation

		Gender		Total
		Female	Male	
Paid Hours of Work/Week	Nil	6	1	7
	Up to 15	4	5	9
	16-30	17	5	22
	31-40	21	11	32
	40 or More	9	27	36
Total		57	49	106

Mean: Female: 31-40 hours, Male: 40 or more hours

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Appendix 7.2 17th National RURAL HEALTH Conference, Hobart, Tasmania, 1-4 March 2003 Presented paper in the General Section: The Art and Science of Healthy Community -sharing the country know-how.
NRHA Conference 2003 Paper Do rural pharmacists really do health promotion outside pharmacies? Preliminary results for rural health